



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

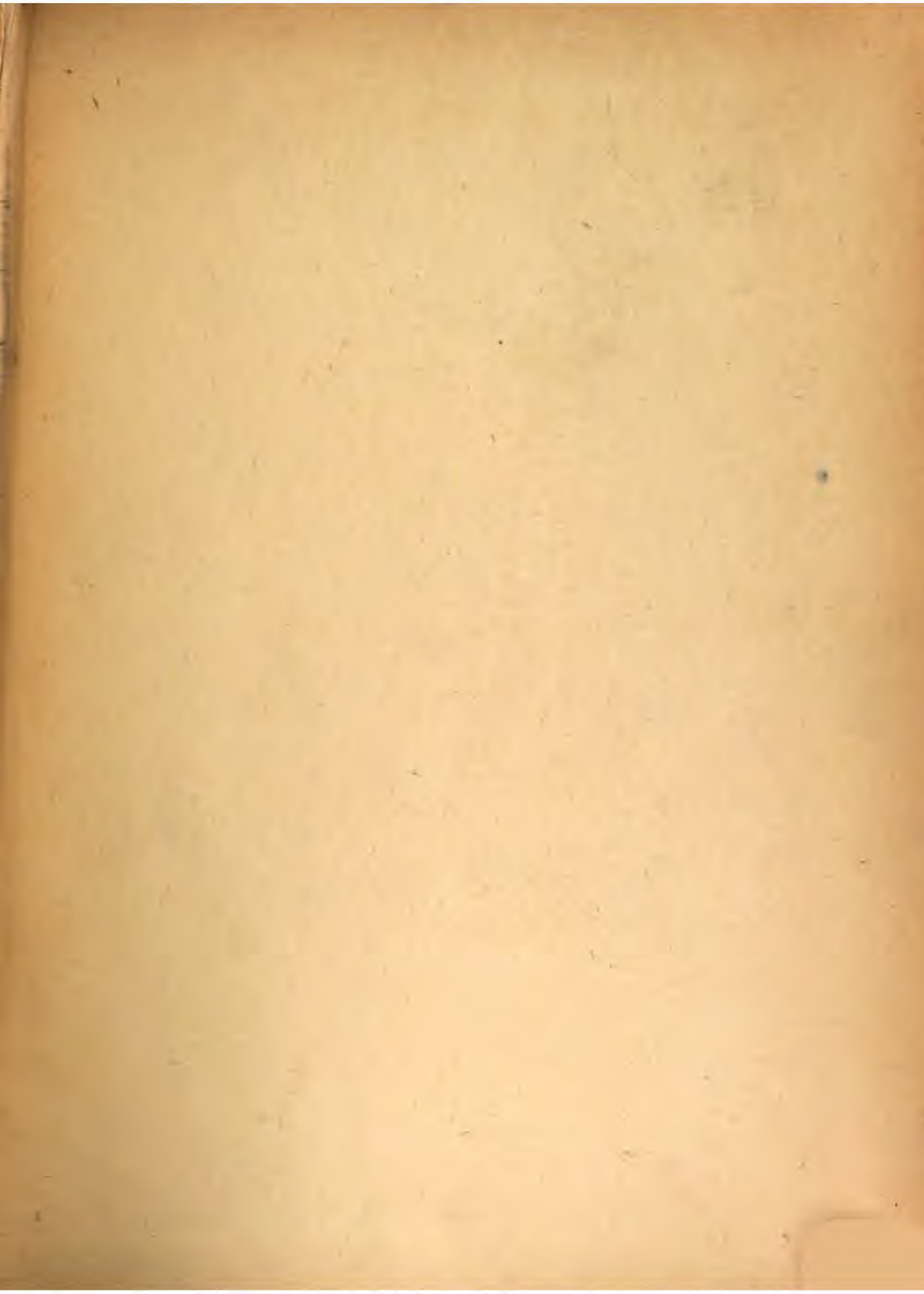
Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Ex Libris 1214

HARVARD UNIVERSITY



LIBRARY OF THE
GRADUATE SCHOOL
OF EDUCATION





The Review of Education

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly THE CHILD STUDY MONTHLY)

PUBLISHED MONTHLY
EXCEPT JULY AND AUGUST

VOLUME VII
June 1901, to May 1902, Inclusive

CHICAGO
A. W. MUMFORD, Publisher
203 MICHIGAN AVE.
1902

educ P

218.1.5

v. 7

1901-02

HARVARD UNIVERSITY
GRADUATE SCHOOL OF EDUCATION
LIBRARY

30-124
4-2

△
Educ P 127.1

EVERY CHILD DESERVES A GOOD START.

Hundreds of children are now using the mind directly in the act of speaking. It is readily acquired by young and old. It is never too late. It is never too early.

Do not bring up your child to believe he has no talking ability.

Do not deceive yourself by fearing you cannot express your thought.

Children, adults, possessors of university degrees, orators, poor speakers, and many others have improved their speech and fluency by following these directions.

Conversation and Effectual Ready Utterance.

By W. E. WATT, A.M., Ph.D.

Success depends on what one says and how he says it. Success in any line. Why not say it well?

The greatest accomplishment is good speech. There is one correct way to practice. The slowest and dullest can acquire it.

Do you know why many people are dull and slow and devoid of ideas? This book tells why and how to avoid being so.

It combines the best teachings of modern science with discoveries and experiments made by the author, and is destined to be rated as one of the great books of the twentieth century.

Laid paper, gilt tops, silk and gold. Mailed for \$1.00.

FREDERICK A. WATT, Publisher,

40 E. Randolph Street, Chicago, Ill.

NEW YORK EDUCATION

The Best All Around Educational Magazine in the State

C. E. FRANKLIN, Editor.

Price - - - - \$1.00 a Year

This is a beautifully illustrated school magazine of sixty-four pages, with handsomely illuminated cover, and contains each month articles of interest and value for teachers of all grades, from the kindergarten to the college.

While the magazine as originally planned was intended especially for New York teachers it covers the general educational field in its articles and discussions, and is therefore of value to the teachers of every State and to all who are interested in educational work.

In order to still further increase our subscription list we make the following

GREAT COMBINATION OFFER:

	Regular Price	Our Price
NEW YORK EDUCATION and Review of Reviews.....	\$3.50	\$2.50
NEW YORK EDUCATION and Teachers' World	2.00	1.50
NEW YORK EDUCATION and Popular Educator.....	2.00	1.50
NEW YORK EDUCATION and The Current History Review..	1.25	1.00

During the coming year NEW YORK EDUCATION will be brighter and better than ever before and no progressive teacher can afford to be without it.
Send 10 cents for sample copy.

NEW YORK EDUCATION COMPANY

81 Chapel Street, Albany, N. Y.

THE MOST BEAUTIFUL
PICTURES
EVER PUBLISHED.

BIRDS AND NATURE.

15 Cents a Copy. . \$1.50 per Year.

MAGAZINES,
BOUND VOLUMES
and
COLORED PICTURES.

Grand Prize, Paris Exposition, 1900.

Books and pictures you *SHOULD* have, because of their beauty and value, and you *CAN* have because of the price.

Bound Volumes I, II, III, IV, V, VI, VII, VIII, IX, each 8vo, 244 pages, from 40 to 60 colored pictures, 8x10 inches, cloth, \$1.50. Double volumes I and II, III and IV, V and VI, VII and VIII. Each, Half Morocco, \$3.00.

Exchange Price for bound volumes, when magazines are returned; single volumes, cloth, 75c. Double volumes, half Morocco, \$1.50.

Magazines. Back numbers always in stock, \$1.50 per year, 15c per single copy. At this price one can afford to remove the colored pictures for decoration or studies.

Pictures in natural colors; monthly sets for 1897, 15c per set; all other years, 12c per monthly set; pictures assorted as desired, 2c each. No orders received for less than 20 pictures.

Subscribers not in arrears can order bound volumes and magazines at 20 per cent discount from regular prices (not special prices) and pictures at 1c each. It pays to be a subscriber. New or renewing subscribers can select 20 pictures free.

Premiums. We will send free with each yearly subscription one of the following colored pictures: (1) Song of the Lark, 18x21; (2) Gladstone, 18x24; (3) Golden Pheasant, 18x24; (4) Birth of American Flag, 12x18; (5) 20 pictures from magazine.

Special Offers. (1) The nine volumes, cloth, \$9.00; (2) the four double volumes, half morocco, \$8.00; (3) the 49 magazines, \$4.00; (4) the 424 colored pictures, \$4.24; (5) Birds and Nature, one year, and 75 pictures, \$2.00; (6) all of the magazines Jan. 1897 to Dec. 1901, \$5.00.

We always recommend the four double volumes, half morocco, containing 376 plates, \$8.00.

JANUARY, 1897.

- 1 Nounpareil.
- 2 Resplendent Trogon.
- 3 Mandarin Duck.
- 4 Golden Pheasant.
- 5 Australian Parrakeet.
- 6 Cock of the Rock.
- 7 Red Bird of Paradise.
- 8 Yellow-throated Toucan.
- 9 Red-rumped Tanager.
- 10 Golden Oriole.

FEBRUARY, 1897.

- 11 American Blue Jay.
- 12 Swallow-tailed Indian Roller.
- 13 Red-headed Woodpecker.
- 14 Mexican Mot Mot.
- 15 King Parrot.
- 16 American Robin.
- 17 American Kingfisher.
- 18 Blue-mountain Lory.
- 19 Red-winged Black Bird.
- 20 Cardinal, or Red Bird.

MARCH, 1897.

- 21 Blue Bird.
- 22 Barn Swallow.
- 23 Brown Thrasher.
- 24 Japan Pheasant.
- 25 Bobolink.
- 26 American Crow.
- 27 Flicker.
- 28 Black Tern.
- 29 Meadow Lark.
- 30 Great Horned Owl.

APRIL, 1897.

- 31 Rose-breasted Grosbeak.
- 32 Canada Jay.
- 33 Purple Gallinule.
- 34 Smith's Longspur.
- 35 American Red Crossbill.
- 36 California Woodpecker.
- 37 Pied-billed Grebe.
- 38 Bohemian Wax Wing.
- 39 Long-billed Marsh Wren.
- 40 Arizona Jay.

MAY, 1897.

- 41 Screech Owl.
- 42 Orchard Oriole.
- 43 Marsh Hawk.
- 44 Scissor-tailed Flycatcher.
- 45 Black-capped Chickadee.
- 46 Prothonotary Warbler.
- 47 Indigo Bird.
- 48 Night Hawk.
- 49 Wood Thrush.
- 50 Cat Bird.

JUNE, 1897.

- 51 Yellow-throated Vireo.
- 52 American Mocking Bird.
- 53 Black-crowned Night Heron.
- 54 Ring-billed Gull.
- 55 Logger-head Shrike.
- 56 Baltimore Oriole.
- 57 Snowy Owl.
- 58 Scarlet Tanager.
- 59 Ruffed Grouse.
- 60 Black and White Creeping Warbler.

JULY, 1897.

- 61 American Hald Eagle.
- 62 Ring Plover.
- 63 Mallard Duck.
- 64 American Avocet.
- 65 Canvas-back Duck.
- 66 Wood Duck.
- 67 Anhinga, or Snake Bird.
- 68 American Woodcock.
- 69 White-winged Sooter.
- 70 Snowy Heron, or Little Egret.

AUGUST, 1897.

- 71 Osprey.
- 72 Sora Rail.
- 73 Kentucky Warbler.
- 74 Red-breasted Merganser.
- 75 Yellow Legs.
- 76 Skylark.
- 77 Wilson's Phalarope.
- 78 Evening Grosbeak.
- 79 Turkey Vulture.
- 80 Gambel's Partridge.

SEPTEMBER, 1897.

- 81 Summer Yellow Bird.
- 82 Hermit Thrush.
- 83 Song Sparrow.
- 84 Yellow-billed Cuckoo.
- 85 Ruby-throated Hummingbird.
- 86 House Wren.
- 87 Phoebe.
- 88 Ruby-crowned Kinglet.
- 89 Mourning Dove.
- 90 White-breasted Nuthatch.

OCTOBER, 1897.

- 91 Blackburnian Warbler.
- 92 Gold Finch.
- 93 Chimney Swift.
- 94 Horned Lark.
- 95 Yellow-bellied Sapsucker.
- 96 Warbling Vireo.
- 97 Wood Pewee.
- 98 Snow Bunting.
- 99 Junco.
- 100 King Bird.

NOVEMBER, 1897.

- 101 Summer Tanager.
- 102 White-fronted Goose.
- 103 Turnstone.
- 104 Belted Piping Plover.
- 105 Wild Turkey.
- 106 Cerulean Warbler.
- 107 Yellow-billed Tropic Bird.
- 108 European Kingfisher.
- 109 Vermilion Flycatcher.
- 110 Lazuli Bunting.

DECEMBER, 1897.

- 111 Mountain Blue Bird.
- 112 English Sparrow.
- 113 Allen's Hummingbird.
- 114 Green-winged Teal.
- 115 Black Grouse.
- 116 Flamingo.
- 117 Verdin.
- 118 Bronzed Grackle.
- 119 Ring-necked Pheasant.
- 120 Yellow-breasted Chat.

JANUARY, 1898.

- 121 Crowned Pigeon.
- 122 Red-eyed Vireo.
- 123 Fox Sparrow.
- 124 Bob White.
- 125 Passenger Pigeon.
- 126 Short-eared Owl.
- 127 Rose Cockatoo.
- 128 Mountain Partridge.

FEBRUARY, 1898.

- 129 Least Bittern.
- 130 Bald Pate Duck.
- 131 Purple Finch.
- 132 Red-bellied Woodpecker.
- 133 Sawwhet Owl.
- 134 Black Swan.
- 135 Snowy Plover.
- 136 Lesser Prairie Hen.

MARCH, 1898.

- 137 Black Duck.
- 138 Wilson's Petrel.
- 139 Blue-Gray Gnat-Catcher.
- 140 American Coot.
- 141 Ivory-billed Woodpecker.
- 142 American Sparrow Hawk.
- 143 Silver Pheasant.
- 144 Scaled Partridge.

APRIL, 1898.

- 145 Ovenbird.
- 146 American Three-toed Woodpecker.
- 147 Bartramian Sandpiper.
- 148 Nightingale.
- 149 Roseate Spoonbill.
- 150 Dickcissel.
- 151 Dusky Grouse.
- 152 Eggs, First Series.

MAY, 1898.

- 153 South American Rhea.
- 154 Baybreasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.

- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.

JUNE, 1898.

- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas King Bird.
- 168 Eggs, Third Series.

JULY, 1898.

- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossom.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

BIRDS AND NATURE.—Continued.

AUGUST, 1898.

- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.

SEPTEMBER, 1898.

- 185 American Herring Gull.
- 186 Racoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.

OCTOBER, 1898.

- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.

NOVEMBER, 1898.

- 201 Prairie Sharp-tail Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.

DECEMBER, 1898.

- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Humming-Birds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.

JANUARY, 1899.

- 217 Chimpanzee.
- 218 Puma.
- 219 Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.

FEBRUARY, 1899.

- 225 Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.

MARCH, 1899.

- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.

APRIL, 1899.

- 241 Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grape.
- 247 Swift Fox.
- 248 Hyacinth.

MAY, 1899.

- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-Tailed Mole.
- 256 Cineraria.

JUNE, 1899.

- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-Throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-side Warbler.
- 264 Black-throated Blue Warbler.

SEPTEMBER, 1899.

- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.

OCTOBER, 1899.

- 273 Forests.
- 274 Grand Cañon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.

NOVEMBER, 1899.

- 281 Lady-Slipper.
- 282 Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.

DECEMBER, 1899.

- 289 Narcissus.
- 290 Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-Throat.
- 293 Lyre Bird.
- 294 Cow Bird.
- 295 Wild Cat.
- 296 European Squirrel.

JANUARY, 1900.

- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Quince.
- 303 Quartz.
- 304 Lily of the Valley.

FEBRUARY, 1900.

- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Licorice.
- 312 Yellow Lady-Slipper and Painted Oup.

MARCH, 1899.

- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Poppy.
- 319 Primrose.
- 320 Copper and Lead.

APRIL, 1900.

- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.

MAY, 1900.

- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Digitalis.
- 336 Raven.

JUNE, 1900.

- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Britanny—(Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.

SEPTEMBER, 1900.

- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 New England Aster.
- 348 Late Purple Aster.
- 349 Wild Yellow or Canadian Lily.
- 350 Vesper Sparrow.
- 351 Calico Bass.
- 352 Mountain Lake.
- 353 Banana.

OCTOBER, 1900.

- 354 Oswego Tea or Bee Balm.
- 355 Fringed Gentian.
- 356 Closed or Blind Gentian.
- 357 Tall or Giant Sunflower.
- 358 Black-eyed Susan or Ox-eye Daisy.
- 359 Wild Columbine.
- 360 American Redstart.
- 361 Trout.
- 362 Ocean Waves.
- 363 Domestic Fowls.

NOVEMBER, 1900.

- 364 Western Willett.
- 365 Buffle-Head.
- 366 American Eared Grebe.
- 367 Louisiana Tanager.
- 368 Luna and Polyphemus Moths.
- 369 Prong-Horned Antelope.
- 370 Sensitive Plant.
- 371 Almond (Leaf, Flower and Fruit).

DECEMBER, 1900.

- 372 Western Horned Owl.
- 373 Long-crested Jay.
- 374 Fulvous Tree-toad.
- 375 Red-breasted Sapsucker.
- 376 Promethean and Cecropian Moths.
- 377 Irish Setter.
- 378 Pitcher Plant (Nepenthes).
- 379 Mandrake (Rhizome, Leaf, Flower and Fruit).

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

BIRDS AND NATURE.—Continued.

JANUARY, 1901.

377 Hawk Owl.
378 Knot or Robin Snipe.
379 White-winged Crossbill.
380 Townsend's Warbler.
381 Water Shells.
382 Collared Lizard.
383 Fruit: Apple.
384 Vanilla Plant.

FEBRUARY, 1901.

385 American Rough-legged and
Young Red-tailed Hawks.
386 Short-billed Dowitcher.
387 Great-tailed Grackle.
388 Hooded Warbler.
389 Land Shells.
390 Gila Monster.
391 Cassia Cinnamon Plant.
392 Fruit: Pomegranate.

MARCH.

393 Owl Parrot.
394 Gray Parrot.
395 White Pelican.
396 Marbled Murrelet.
397 Black Bear.
398 Pond and River Shells.
399 Fruit: Orange.
400 Medicinal Plant: Pepper.

APRIL.

401 Crested Carrasaw.
402 Harlequin Duck.
403 Canada Grouse.
404 Dovekie.
405 Beaver.
406 Marine Shells.
407 Fruit: Lemon.
408 Medicinal Plant: Cubebs.

MAY, 1901.

409 Audubon's Oriole.
410 Marbled Godwit.
411 Rusty Blackbird or Grackle.
412 Surf Scoter.
413 American Elk.
414 Nautilus Shells.
415 Flowers: Mountain Laurel,
Trailing Arbutus.
416 Medicinal Plant: Hops.

JUNE, 1901.

417 Bullock's Oriole.
418 Sanderling.
419 Great Northern Shrike.
420 Brandt's Cormorant.
421 Buffalo.
422 Agates.
423 Flowers: Great Mullein,
Moth Mullein.
424 Medicinal Plant: Cocoa Fruit.

Order some of these pictures for Bird Day and Arbor Day.

THE ABOVE 424 PICTURES ONLY \$4.24

- - The Children's Hour - -

A Song Book for the School and Home, by Frank L. Sealy, Conductor of the
Newark Madrigal Club, Accompanist for Walter Damrosch
in the New York Oratorio Society, etc.

A NEW SONG BOOK

With arrangements from Abt, Schumann, Reinecke, Mendelssohn, Fesca, Peel, Gade, Gluck and others; melodious songs of pronounced carrying, wearing and singing qualities, quickly learned, and easily within range of children's voices. Over 5,000 used in the Newark Public Schools.

Cloth. 175 pp. Price, 50 cents.

MORE PICTURES IN NATURAL COLORS.

In addition to the 436 beautiful plates in colors true to nature which have appeared in Birds and Nature, we have printed the following, size 7x10, suitable for framing.
Two cents each; the twelve for 20 cents.

1001 Gold-finch Tanager, Indigo Bird.	1007 Red Fox.
1002 Ruffed Grouse.	1008 Lioness and Cubs.
1003 Wood Duck.	1009 Holland Water Scene.
1004 Gray Squirrel.	1010 Lake Steamer.
1005 Geyser—Old Faithful.	1011 Skating Scene.
1006 Golden-eyed Ducks.	1012 Mammoth Cave.

Large pictures in the colors of nature. Price, 25 cents each or the 3 for 50 cents, postpaid.
All suitable for framing.

1201 Golden Pheasant, life size 18x24 inches.	1202 Song of the Lark (Breton) 18x21 inches.
1203 Gladstone, the Grand Old Man, 18x24 inches.	

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? Telegraph.—*To Principal W. B. Carhart, Coeymans, N. Y.,* March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart, March 25.*

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—*To President Smiley, March 25.*

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley, March 25.*

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—*To Mr. Carhart.*

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart, March 26.*

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—*To Mr. Carhart, March 26.*

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart, March 26.*

Telegram.—Carhart telegraphs he will start Thursday.—*To President Smiley, March 26.*

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart, March 27.*

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—*To Mr. Carhart, March 27.*

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

Tite Grip
Weaving
Needle ...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

A Tonic and Nerve Food

Horsford's Acid Phosphato

Nourishes, strengthens and invigorates the body,
restores the appetite and induces restful sleep.

The genuine bears the name "HORSFORD'S" on label.

Summer School of Pedagogy

CHICAGO KINDERGARTEN COLLEGE

JULY 1st TO AUGUST 10th, 1901

THE SCHOOL IS INTENDED TO MEET THE NEEDS OF KINDERGARTNERS,
PUBLIC OR PRIVATE SCHOOL TEACHERS AND PRINCIPALS.

Address for information 10 E. Van Buren St., Chicago, Ill.

THE HOLTON PRIMER

By M. ADELAIDE HOLTON

Supervisor of Primary Schools, Salt Lake City, Utah

Cloth. 112 pages. For introduction, 25c
JUST READY

1. It is a Primer in fact as well as in name, from the first page to the last. The lessons increase in difficulty very slowly.
2. The lessons are full of life. They have dramatic quality. They stimulate a natural expression.
3. The lessons are varied in interest. They avoid monotony.
4. The book has a small and natural vocabulary.
5. Each lesson is short and a logical whole.
6. There are several lessons upon each important subject.
7. Action lessons are frequent. The child is asked to *do* things, not merely to *see* things.
8. The memory gems have a definite relation to the text. They are exceptionally choice.
9. The book is fully illustrated in color and half-tone.
10. The pictures illustrate the text. The book is not made up of mechanical stories written about pictures.
11. Special care has been used in the selection of the type. It is large, open, and even-faced.

Why Not Write Us?

RAND, McNALLY & CO.

PUBLISHERS

CHICAGO

NEW YORK

Announcements!

HOLIDAY SONGS

AND

Every Day Songs and Games

By Emilie Poulsson.

This will be one of the most important books of the year.

Raphia and Reed Work

By Elizabeth S. Knapp.

A timely and much needed book.
Both will be published before September.

MILTON BRADLEY CO.,
SPRINGFIELD, MASS.

NEW YORK,

11 East 16th St.

PHILADELPHIA,

1333 Arch St.

ATLANTA,

168 Peachtree St.

SAN FRANCISCO,

122 McAllister St.

The Review of Education.

VOL. VII Whole no. 63

CHICAGO, JUNE, 1901.

No. 1.

THE EDITOR'S HARD CHAIR AND THE PUBLISHER'S STUDY.

The CHILD-STUDY MONTHLY takes on a new dress with this issue. The type is improved; the single column makes way for the double and its name becomes the REVIEW OF EDUCATION. These changes are generally desired by our best teachers.

Hon. Alfred Bayliss, State Superintendent Public Instruction for Illinois, was for years editor of the *Educational Current*, a very important feature of our CHILD-STUDY MONTHLY. Upon receiving the announcement of the REVIEW OF EDUCATION he wrote that inasmuch as this idea came pretty near originating with him he thought he should have a complimentary subscription for the first one hundred years of its life. We replied that we would place him on the free list for ninety-nine years, no longer. He feels that it will be a very useful journal.

As its title implies the REVIEW OF EDUCATION will not seek to compete with its contemporaries but rather to supplement them. It is not a question whether it will be better than other school journals; it will be different. Each issue will be supplemented by two of our beautiful color bird pictures reproduced from nature by color photography. Nothing in the line of supplements has hitherto been attempted to compare with these.

It will contain extracts from leading educational journals everywhere; reviews of the best books and periodicals; special contributions from well known teachers and important educational news from each of the states.

We present it to you without any apologies but with a sincere desire that it may bring to the educators the best

thought of their fellows. To this end we ask your co-operation; we request your support; we invite your friendly criticism. If in your reading you find material that you think would be helpful to the teaching profession at large we should be pleased to have you call our attention to it. We shall publish it if it seems to be what our readers generally want. We do not hold ourselves responsible for the personal opinion of any of our contributors, but at the same time we wish to have the REVIEW OF EDUCATION voice the best sentiments of those who are devoting their lives to school work.

We shall be pleased to have you call the attention of your fellow teachers to its pages.

NOTES AND NEWS.

An association of teachers and their friends has located three miles east of Spooner, Wis. They claim that they have found an ideal resting place among the trees, flowers, birds, wild flowers and mounds. A Chippewa Indian village is located near by and there is also excellent fishing and hunting. Spooner Lake has ten miles of coast line and many beautiful wooden islands.

The action of the Board of Education of New York City in abolishing the teaching of "vertical handwriting" in the public schools is certain to revive the discussion of the comparative merits of the new and old systems of penmanship. It is also apt to suggest an inquiry into the advisability of dropping the vertical system in other cities where it was adopted when the fad first broke loose among the educators.

While Wisconsin is proud of her possession of a governor who stands bravely for right and principle in defiance even of the bosses of his own party, Illinois is hanging her head more and more in shame of a governor who not only ignores the better voice of his party in order to placate unscrupulous bosses, but sacrifices the public school interests to please a reactionary element which has political strength on election day but which has no sympathy for the public schools. All friends of education at public expense, particularly those in rural districts, were pained exceedingly at Governor Yates' veto of the bill permitting school districts to consolidate by transporting their pupils to a central school, a plan in most successful and satisfactory operation in nearly twenty states. Governor Yates is discounting the confident anticipations with which he was elected and is bringing himself and his party into discredit.

Here was a measure warmly supported by the whole public school sentiment of the state; the plan as working elsewhere had been carefully investigated by the State Superintendent of Public Instruction, himself a practical school man of large experience in country school affairs, who earnestly urged the passage of the bill; in spite of opposition which scrupled at no misrepresentation the bill was supported by a majority of both houses only to be vetoed by a governor whose family name and party standing were considered a guarantee of his devotion to the best interests of the commonwealth.

Flowers and other presents to high school graduates at the coming commencement exercises are prohibited. This was the decision of the Board of Education last night, when it adopted Superintendent Cooley's recommendation to this effect.

The common schools in the United States employ 400,000 teachers. Sixty-eight per cent of these are women. The average wages paid to the men is \$45.25 monthly; to the women, \$38.14.

A woman writing in the Educational Review advises college women to avoid the profession of teaching unless they have a special fitness for the work. The president of a Western college, in speaking on this same subject, says that college

women have more executive ability than college men. The girls pay their bills and keep their college finances in much better shape than the boys. "Why should they not," she says, "go into work that requires executive ability?"

The following firms will have exhibits in the High School, Detroit, during the N. E. A. You will find this a good place to browse:

American Book Co., Educational Publishing Co., Holden Patent Book Cover Co., Smith-Premier Typewriter Co., Butler, Sheldon & Co., The Perry Picture Co., Silver, Burdett & Co., C. W. Bardeen, A. Flanagan Co., The Hammond Typewriter Co., Novello, Ewer & Co., Benj. H. Sanborn & Co., Scott, Foresman & Co., Maynard, Merrill & Co., The Practical Text-Book Co., The Macmillan Co., Potter & Putnam Co., D. C. Heath & Co., Powers & Lyons, Rand, McNally & Co., Herman Haustein, Jos. Dixon Crucible Co., The Morse Company, Thomas Charles Co., The Oliver Typewriter Co., A. W. Mumford, Alfred L. Robbins-Martin Co., Werner School Book Co., Chicago Laboratory Supply & Scale Co., Central Scientific Co., Central School Supply House, Chandler & Barber, Wadsworth, Howland & Co., Arthur J. Barnes, Standard Table Co. W. H. Wheeler & Co.

There is too great a lack in the practical education of our girls. Such a practical phase of a woman's life as the realization and meeting of honest obligations never enters into a girl's studies at school, college, or, in the vast majority of cases, even at home. We go on and let our girls study useless ologies and isms, and accumulate a vast amount of undigested and unintelligible information which never, even for a single moment, will be of the slightest use to them in their lives. But of the practical things, yes, the fundamental principles which must govern their lives, they are taught either nothing or little.

Prof. Ross goes to the University of Nebraska.

Carnegie has endowed the Scotch Universities to the tune of \$10,000,000.

The editing of this periodical, like getting married, is a problem in selection.

The *Ladies' Home Journal* says women are slower in paying their bills than men; surely this does not apply to teachers.

If you attend the N. E. A. we hope you will call at our exhibit in the High School Building.

The June *Review of Reviews* gives five pages and twelve pictures to a report of the recent southern educational conference.

Albert H. Yoder, formerly President of the Vincennes University, but more recently editor of the *Child-Study Monthly*, has accepted the chair of Pedagogy in the University of Washington.

Supt. Boone, Cincinnati, has been unanimously re-elected. It will soon be Editor Boone also. The educational press can point with pride to such editors as Bardeen, Boone, Brown and Butler. So the B's have it. Call them the big 4. If you take their magazines and the REVIEW OF EDUCATION you won't need more.

Dr. Walker, headmaster of St. Paul's, does not take kindly to Pres. Harper's plan of planting Yankee colleges in Europe.

He says there is a luster about the scholarship of Eton, Harrow and Rugby, not to say Oxford and Cambridge, which Dr. Harper will find a

dangerous competitor to his branch schools.

Dr. Walker has been connected with St. Paul's twenty-five years and says he never came across a first-class American boy.

Dr. Walker's criticism seems to be that American education abroad for globe trotters will not be very thorough.

Dr. J. P. Gordy of the University of Ohio has been appointed to the chair of History of Education in the New York School of Pedagogy.

The next issue of the REVIEW OF EDUCATION will be devoted to extracts from papers and addresses at the N. E. A., Detroit. It will be as good as we can make it.

Now that the postoffice department has settled the shirt-waist question sensibly, let it be as wise in regard to periodicals that offer premiums.

We shall try to make the REVIEW OF EDUCATION "as you like it."

The three-color supplement for the REVIEW OF EDUCATION is the Blue Jay and Baltimore Oriole.

Chicago has adopted free text-books in the first four grades.

IDEAL PUBLIC SCHOOLS.

BY ANDREW S. DRAPER,

President University of Illinois.

Boys and girls hardly understand the purposes of the public schools. They think very little about the principles upon which our great school system, in which there are half a million of teachers and fifteen millions of pupils, and which costs two hundred million dollars each year, is maintained. They do not trouble themselves over the ways by which the system is to accomplish its purposes and justify all it costs. Too many parents give little thought to the matter.

The impression of the people who do not think very hard about it is that the schools are to teach pupils to read and write, and use numbers, and know something about birds and flowers, and countries and peoples, and the like. The

schools are to do this; but they are weak indeed and they are not worth what they cost unless they do a great deal more.

All of our states make laws requiring the people to maintain schools for all the children. Nearly all the people would do this without any law. The people of each state make laws in order that if there are any who do not want to support schools, they will be compelled to do so. In this way, throughout the country, a school is sure to be within reach of every home. Nearly all of the cities and towns have established high schools, and many of the states have set up great state universities. All this is to build up self-respecting character and develop sound views of life,

to train up good citizens and make the states and the republic safe; it is not only to give every child an equal chance with every other, but to impel every one to make the most of his chance.

That is the ideal purpose of the schools. To come near attaining it, the school must come near being ideal. We are very likely to judge of a school by the looks of the schoolhouse. We may make a mistake, but we are very likely to be right.

If we see a building that is attractive, with trees about it, and with some green sod and flower-beds in the summer-time, and with a whole and bright American flag floating over it, we shall be likely to find that things are about as they should be inside. If the building looks ugly and the grounds are unkempt and the flag ragged, we shall be likely to find that the schoolhouse is dirty and unhealthful. We shall also be likely to find that the teacher is lazy and the pupils listless, and the work of little account.

IMPORTANCE OF "GOOD LOOKS."

There may be cases in which this is not so. Clothes do not make the man, it is true, but in normal business conditions clothes indicate the qualities of the man. A business man who is cleanly and neatly dressed is probably a much better and stronger man than one who looks shabby, because the better man will usually look well. So a rickety and particularly a dirty schoolhouse is almost as certain proof of a weak school, as a four-days'-old beard, a dirty shirt and baggy trousers are commonly indicative of a cheap kind of business man. People who know the value of a good school will provide a good home for it, and in turn the good home will help the school to grow better.

A true teacher, well sustained, will make an ideal school; but true teachers are few, or, at least, they seem few because so many people who are really unable to teach well want to work at it for the pay, and are allowed to do so. Here is the greatest trouble in building up ideal schools.

THE IDEAL TEACHER.

An ideal teacher must first of all be an ideal man or woman. It is not enough that a teacher does not lie or swear or to teach school who do not do any of

those things, and yet they do very little teaching. No one teaches well unless he has the respect of pupils, and he cannot have that unless he is a self-respecting character. If he is this, he will be neat in person, regular in his mode of life, honorable in his treatment of others, and sincere in his purpose to make the most of himself and do the most he can for others.

An efficient teacher will be well-informed. He will know what has occurred in the world, and what is happening every day. If he knows only a little about numbers and geography and the like, and does little but go over the routine of these things year after year, he will shrivel up and ought to blow away. He must read the newspapers and magazines and the best books, and he must travel and see things if he would be of use to a school.

A teacher must not only know all about what he tries to teach, but he must know how to teach. He must have studied the minds of children, and the best ways of gaining their interest and of leading them to act for themselves. A true teacher will like children, not only the inordinately good ones, who too often die young, but the other and more common kind, who are wilful and perhaps ugly and shirk work if they can, but who generally grow up and become very decent men and women, after all.

SYMPATHY WITH PLAY.

A teacher must enter into the life of pupils, their work and their sports. One who only tolerates play because he cannot help it ought to be relegated to the retired list of the "Army of Martyrs," as teachers are sometimes called. He would have no claim, however, to a pension, for he has never been a good soldier in that army.

cheat. There are plenty of people trying

A true teacher will be master of the school, and so undisputed a master that he will not be afraid to let pupils have all the freedom they like so long as it does not interfere with the work of the school. Children are not simpletons. They dislike rules and hate watchers and keepers, but they laugh at teachers who are "easy" or "soft." They respect and love manly men and womanly women.

(To be continued.)

CHILD-STUDY AND EDUCATION.

BY JAMES SULLY, PH.D.

Let us candidly admit that a large part of the work done by our child-study associations is not scientific research. We may, perhaps, dignify it with the name of study; not with that of scientific investigation. Taking down a child's sayings; asking him about his preferences among the heroes of history or fiction, this and much else of a like kind does not transform our worthy member of a child-study association into a savant. The sooner we all get this absurd idea out of our heads the better. Genuine scientific work in the domain of child-observation, such as Darwin, Preyer and Miss Shinn give us, is skilled work of the most special kind and presupposes years of careful preparation.

I am disposed to agree with Professor Münsterberg and with another German psychologist, Professor Stumpf, of Berlin, that so much of the statistical inquiries which make up so large a part of the work of the members of these child-study societies is sadly wanting in scientific dignity. Professor Stumpf writes of the answers to questions about dolls sent out by Professor Stanley Hall, that even when they do not fail to tell us anything new they are destitute of all interest, scientific as well as educational. The relative numbers of preferences avowed for wax dolls, for paper dolls, for china dolls, and so forth, can, he thinks, at the best only be of interest to the makers of dolls. I should not go quite so far as Professor Stumpf, for I can easily conceive of a knowledge of children's preferences with respect to doll-material throwing light on the whole attitude of "dollatry," which is certainly a large feature in child life and requiring to be studied if we are seriously bent on knowing this life. At the same time I quite agree that this kind of investigation borders on the frivolous.

Yet from the point of view alike of psychological value and of benefit to the observer, I am disposed to put the methodical and prolonged study of an individual child far above this statistical work. So long as our investigations are wide-ranging, they are apt to be thin and scrappy in their output. A child is a liv-

ing unity, and "pace" Professor Münsterberg, we are able to observe him to some extent as a unity. Those who have read Miss Shinn's admirable notes need not be told what this methodical observation of the whole child means. But study of a child can be of value when it falls short of this most exhaustive kind of observation. A careful record of the play of a single child accompanied by a few general remarks on his temper, intelligence, tastes, etc., would have for the psychologist and for the observer alike more value than the results of questionnaires addressed to large numbers of children.

It may readily be thought that the study of an individual child could tell us only of one particular instance of the young mind, and not of the common type which those who desire to gain greater insight into child-nature are thinking of. Yet we learn the typical structure of a species of plants through careful study of a normal individual. Children vary no doubt much more than plants of the same species; yet it holds good, as the work of Preyer shows, that we best approach the typical form of a child's mental development by the consecutive, methodical observation of one specimen. Such study of one individual child should, of course, be supplemented later by a comparison of the results with those of others' similar observations.

Such a study of one child—or a pair of children in their similarities and contrasts—falls more naturally to the parent than to the teacher. Its results can only be of value when the parent or other dweller in the house acquires the difficult art of subordinating the personal interest in "my child" to a scientific interest in the child as such. Teachers who really mean to reach any depth in their soundings of child-nature should also try to follow out such a continuous and methodical piece of investigation into the mental development of one or two children. The drawing up of a schedule for this kind of investigation, at once close and continuous, and on the other hand of a manageable compass is, I think,

the thing most needed just now by our child-study associations.

Such work, in order to be of the highest benefit to the worker, should include first of all some finer exercise of the observing faculty in the noting of objects of sense—e. g., facial or other movements, articulate sounds; and secondly some amount of interpretation of what is seen or heard. With respect to the former it must be remembered that to observe and to record with an approach to scientific precision say the movements of expression of an infant, makes a heavy demand on the student. Professor Stanley Hall's schedule of points to be noted in the bodily manifestations of anger in a child could, I venture to think, only be worked out with an approximation to exactness by a particularly good observer, ready not merely to seize the aspects of an object and changes in these swiftly and neatly, but to attend at one and the same moment to a number of such aspects and changes. Tasks of this difficulty should be led up to gradually. More simple works, such as the accurate recording of carefully selected varieties of facial movements, gestures, attitudes of body, or of vocal utterance would supply a quite hard enough exercise in the early stages of training.

As to interpretation, the task of adding the right meanings to a child's movements or vocal utterances, is often of so delicate a character that we might well shrink from entrusting it to young students. Yet if one is to study child-nature at all one must be exercised in some measure of interpretation, and these exercises in reading of psychical meaning should certainly constitute one chief portion in the work of our associations. The student should be invited to observe and interpret some specific class of movements, and this part of his work should include critical reflection and some comparison of value of different explanations which may be offered. The nonsense that has been talked, even in books, on the wonderful emotional susceptibilities of children shows how little attention is wont to be devoted to the work of careful interpretation. To decide, for example, whether a look of sympathetic grief in a child's face is a genuine expression of feeling or a more or less mechanical im-

itation of another's expression may tax the powers even of one familiar with psychological principles.

This training in the finer observation and interpretation presupposes that the observer is in touch with a child who has not come to a full use of words. It is during the first years—especially the first three—that the powers of observing closely and interpreting wisely are put to the severest test. This is clearly illustrated in the observations of Darwin, Preyer, Miss Shinn and others. Hence the importance of a methodical study of a "mite of a child" as a part of a teacher's training in psychological observation and interpretation. After some mastery of language has been attained there will, of course, be less call for the finer sort of observation and of interpretation alike. Yet it is a serious error to suppose that we can get at children's thoughts and emotions merely by listening to their words. Language is but one of the avenues by which we approach another mind, whether that of a child or of an adult. The deeper and more subtle understanding of one mind by another means a good deal more than a scrutiny of the meaning of words. We must remember, too, that a child can only very imperfectly express his thoughts and desires through the medium of our highly artificial language. Hence a considerable demand will be made on observation and interpretation even in the case of older children.

Experimenting on a child's mind has its serious risks. An untrained person is pretty certain, when "teasing" the young mind, to go wrong by overlooking this and that influence which he has introduced and the effect of which makes the meaning of the result other than he supposes it to be. To go back to the simple experiment of a question: the supposition that a child's answer to your question will certainly give you his net idea or his unadulterated feeling shows a touching simplicity of faith. When you take up the attitude of questioner he will be apt to take up the attitude of one who wants to know what sort of an answer you are in pursuit of, whether from the amiable desire of giving it to you, or, as may happen with the "contrary" sort of child, from the less amiable wish to baffle or "dish" you. In this way he

may, without having a clear intention to deceive you, mislead you as to the character of his real ideas and feelings.

Nor is this the only kind of interference with his experiment to which the questioner of a child is exposed. There may be deeper lying forces at work in the young breast which are strong enough to defeat your end. It has been found as a result of a questionnaire that girls "own up" to fear more readily than boys. Of course they do. A girl's honor is less at stake; she has vastly less to lose by a confession of fear than a boy has. The boyish instinct to look brave at least, is in itself an insuperable obstacle to our finding out with any degree of exactness by questioning them what their fears are like.

In addition to these sources of error in particular cases, there is in much of this questioning of children a tendency to induce in the unformed mind a precocious habit of "introspection," of digging up, so to speak, and examining its thoughts and feelings. The development of such a habit must be fatal to all our attempts to get at child-nature, for the very good reason that this, in its genuine and characteristic modes of working, has ceased to be. A child that has begun to think about his fears, his preferences, and so forth as a matter of importance, since you care to ask him about them, has begun unconsciously to transform them, so that you can no longer get into touch with them in their original form. A child's mere conjecture that you are in chase of something in his mind will suffice to destroy the perfect candor which belongs to the unconsidered utterances of confidential moments.

Parents who are quite innocent of child-study are always experimenting in a loose way on their children, trying this and that influence in order to modify the temper, to draw out reluctant action, or to arrest some injurious impulse. Now, why should not such educational experiments be carried out by intelligent and properly trained parents more carefully with something of the definiteness of aim and precision of method which characterize, say, the testing of the color-sense by Preyer or Miss Shinn? A correspondent sent me not long since an account of an experiment which he had

worked out. He noticed that his child, an infant of four weeks, much given to crying, never did so without moving its arms also; and it occurred to him that if he kept the arms quite still the crying might be prevented. He carried out the experiment by placing his hand over the child's two hands, which were lying close together on the chest, and holding them very gently. Success attended the experiment again and again, the child was quieted and fell asleep.

This simple kind of experiment has probably suggested itself to others who, like my correspondent, may be supposed to have never heard of the psychological discussions respecting the relation of emotion to bodily movement or the interesting hypothesis of Professors Lange and James that the bodily activity is the life-blood of the passion. But with more of scientific intelligence this sort of experiment might be greatly improved. It would have been well, for example, if my correspondent had varied his, by trying other restraining forces besides that of his hands with a view to discovering whether the quieting down was due merely to arrested movement or was, in part at least, the effect of the warmth or other attribute of the paternal hand. Such simple experiments in the first crude stages of parental discipline might, I feel sure, when intelligently carried out, help to give more of a scientific basis to our theories of moral education.

To sum up, child-study, though as yet in its crude infancy, and marred by something of the foolishness and impulsiveness of that state, has a future before it if it will only learn to recognize its shortcomings and to aim at a serious standard of work from which it is at present a long way off. One warning seems necessary as a last word on the subject, a warning which grows out of Professor Münsterberg's criticism. The parent and the teacher must not suppose that child-study, even after it has been greatly improved, will meet all their wants when they take on themselves the weighty business of educating children. Much of the extravagant talk of the advocates of this child-study seem to imply that the whole problem of training a child consists in understanding its nature. That would be a fatal day for a community in which

its educators became wholly preoccupied with problems of child-study. We know, every experienced parent or teacher knows, that the problem of training is often made grievously hard just because human nature is so various. . . .

I take it that there is a special behest laid on us just now to raise our ideals in education. It is not necessary to say that we have fallen on a day of vulgar aims and lowered standards of life. It is enough to remind the reader that the air is full, as, perhaps, it has been full before, of the worship of what is not the best, not the best attainable; full, too, alas, of a cynical laughter at any suggestion of aspiring to this highest moral level. The minds of the young come at an alarmingly early age in contact with the newspapers and magazines which reflect this worship of the less worthy. What chance, then, of our children growing up so as to help bring about "a better condition of things?" Shall we trust in these days to the pulpit to neutralize the effect of the worst features of the popular temper? It may suffice to say that this would be risky. If the parent and teacher fail to hold up the standard of "a nobler good" we can

have no assurance that our children will ever get near it. One cannot ignore the fact that there is much in the state of education at this moment to make one feel uneasy on this point. The moral training of the home, the most vital of influences, is apt in these days to be shirked, and where it is undertaken with some degree of seriousness hardly escapes the lowering effect of easy popular standards. Teachers, again, with the pressure of the examined and the inspector ever behind them, have but little time to consider any more remote end than school success. It is to be added that in this scientific age the tendency of thought about education with parents and teachers alike, will be toward child-study rather than toward any thoughtful reconstruction of ideals of character.

Yet the conclusion remains firm that what is needed before all things, before child-study itself, right and commendable though it be, is earnest reflection about the future of our children, reflection which shall lift itself above all conventional ideas of what is good, and test itself in the full white light of ethical thought.—*International Monthly*.

THE KINDERGARTEN AND THE SCHOOL.*

By W. N. HAILMANN,

Superintendent Schools, Dayton, Ohio.

Modern society is almost universally eager for organization, for the closest vital correlation of its members, for a well-nigh ideal subdivision of effort in a steadily widening common purpose, for the fullest utilization of individual excellence in special directions. Modern society is clamorous for activity, for fullest efficiency and beneficence, for unfailing productiveness, for creative fervor, for individual vigor in the service of the general good; yet all these things have scarcely touched the school as a whole. In a number of the essential features of curriculum, equipment and even of method, the school still persists in a worship of a narrow past; its eyes still seem to be closed to the supremacy of the eternal

now, upon which modern society is firmly builded.

To Froebel we owe perhaps the earliest full formulation of the principles which are to guide the school in complying in its work with the requirements of modern society. In the first place, he demands that the various educational factors—home, school and community—should be in full harmony with each other, organically interrelated; that they should, throughout, base their conscious educational work upon a reverent study of childhood and adolescence, with their steadily expanding experiences and aspirations; that at every successive stage of development the pupil should find in his educational institution an ideal world,

affording him opportunities for the full exercise of his powers in rich experience, intense purpose and unhindered achievement, for the free exercise of self-activity in continuous self-expression, individually and socially. To this end he would have the school appeal to the hands of the children, to their eyes and ears and organs of speech, to all that of them lives and grows, in the gaining of knowledge, as well as in the expression of thought and in the achievement of purpose, in the establishment of attitude, in the fixing of the character.

This he would accomplish in the kindergarten and in the earlier years of primary school life through organized play, gradually lifted with the help of a rich material and pictorial symbolism into actual work, practically adding to the literary conventionalism of the school, the workshop and the laboratory, the garden and the studio.

Froebel embodied in his kindergarten a lucid solution of the problems involved in these demands. The notorious conservatism of parents and teachers, however, and their consequent slowness in matters of educational development with reference to the requirements of social progress, closed the school in the beginning, almost hermetically, to Froebel's impassioned appeals and luminous example.

Wisely or unwisely, some of his followers, therefore, recognizing the imperviousness of the school, suggested the establishment of connecting classes, which were to bridge the apparently impassable chasm between the kindergarten and the school.

On the other hand, it is true, these

connecting classes vindicated the superior adaptability of Froebel's principles and method of primary instruction. On the other hand, however, they confirmed conservative teachers and the even more conservative public in the illusion that in organization, equipment and aim, the kindergarten and the school are essentially different and must forever remain distinct institutions. In their eyes, the kindergarten sank to the level of a mere play school and they welcomed the connecting class chiefly as a device for curing children of unwelcome habits acquired in the kindergarten, and of preparing them for the legitimate and more serious work of the school.

Even so earnest and enlightened an advocate of the kindergarten as my friend Dr. Harris fell a victim to this illusion. In his address on "Kindergarten and Primary Methods" at Nashville, he gave unstinted praise to the kindergarten; to its philosophy, its aims, its devices, its success in "helping children to a conquest of nature," in conveying to them "the treasures of experience of the race in solving the problems of life," in making them "wise without the conceit of wisdom." But he held that all this applies only to what he was pleased to consider the symbolic age of childhood, a well rounded period, beginning at the age of 4 and ending at the age of 7 years; that, at the close of this period, the child enters more or less suddenly and completely into a new period, in which the symbolic is to be summarily dismissed and to yield to the exclusive sway of the conventional.

*From an address before International Kindergarten Union, Chicago.

ARE THE SCHOOLS DOING WHAT THE PEOPLE WANT THEM TO DO?

BY JOHN DEWEY,
University of Chicago.

The college has undertaken to maintain the continuity of culture. But culture should not be a protected industry, living at the expense of the freedom and completeness of present social communication and interaction. The sole reason for maintaining the continuity of culture is to make that culture operative and determining in the conditions of modern life, of daily life, of political and industrial life, if you will.

It is comparatively easy to divorce these two functions. At one end of the scale we can erect the culture college; the college which, upon the whole, in its curriculum and methods ignores the demands of the present and insists upon the well-rounded and symmetrical education of the past—an education which is well-rounded simply because the insistent demands of the present are kept from impinging upon it. At the other school which prepares specifically and definitely for the occupations of the present day; which certainly is responding in consistent and obvious ways to the needs of the people.

But, speaking for the higher institutions of learning as a whole, it is clear that both of these types of institutions solve the problem by unduly simplifying it. This is not to say that each has not its own place. It is only to say that that place is not the place of our higher institutions of learning taken in their entirety. Their problem is to join together what is here sundered, the culture factor (by which is meant acquaintance with the best that has been thought and said and done in the past) and the practical factor—or, more truly speaking, the social factor, the factor of adaptation to the present need of the people.

Doubtless, the current implication is that general culture and professional utility are quite independent of each other. The notion of absolute antagonism is, doubtless, wearing away. Like the similar conception of a fixed and obvious gulf between the elect and the

unregenerated, it cannot stand the pressure of the interaction of modern life. It is no longer possible to hug complacently the ideal that the academic teacher is perforce devoted to high spiritual ideals, while the doctor, lawyer, and man of business are engaged in the mercenary pursuit of vulgar utilities. But we have hardly reconstructed our theory of the whole matter. Our conception of culture is still tainted with inheritance from the period of the aristocratic seclusion of a leisure class—leisure meaning relief from participation in the work of a workaday world. If I were to venture into what might appear to you the metaphysical field, I think I could also show that the current idea of culture belongs to the pre-biological period—it is a survival of the time when mind was conceived as an independent entity living in an elegant isolation from its environment.

We come back to the root of the whole matter. To very many the idea of culture covers adequately and completely that for which the college stands. Even to suggest that the college should do what the people want is to lay unholy hands on the sanctity of the college ideal. The people, the mob, the majority, want anything but culture—indeed they are capable of anything but culture. The college stands for the remnant. It is the fortress of the few who are capable of upholding high ideals against the utilitarian clamor of the many. To ask that the colleges do what the people want is to surrender or compromise the idea of culture by requiring the introduction of the professional factor—a preparation for specific callings in life.

All this I say frankly and emphatically I regard as a survival from a dualistic past—from a society which was dualistic practically and politically, drawing fixed lines between classes, and dualistic intellectually, with its rigid separation between the things of matter and of mind—between the affairs of the

world and of the spirit. Social democracy means an abandonment of this dualism. It means a common heritage, a common work, and a common destiny. It is flat hostility to the ethic of modern life to suppose that there are two different ends of life located on different planes; that the few who are educated or to live on a plane of exclusive and isolated culture, while the many toil below on the level of practical endeavor directed at material commodity.

To decline to recognize the intimate connection of professions in modern life with the discipline and culture that come from the pursuit of truth for its own sake, is to be at least one century behind the times. I do not say that the engineer, the doctor, or lawyer, or even the clergyman, or much less the average man of commerce, has yet awakened to the full necessity of this interdependence of theory and practice, to the full significance of the extent in which his activities are already dependent upon knowledge of the truth and the right attitude toward truth. I do not say that the professional classes are as yet fully aware of the dignity and elevation that thus come to their practical callings in life. But this very absence of clear and complete consciousness only makes the duty of the university the clearer. It is so to order its affairs that the availability of truth for life, and the dependence of the professional occupation upon science—upon insight into an ordered body of fact, and the possession of the right at-

titude of inquiry—shall become patent to all men.

To say that the reality of the present university is professional training would perhaps give little less than material for misunderstanding. It would seem to mean that what most would regard as the important and essential feature of the university was a mere preliminary or incident, and that the reality is located in the schools of medicine, law, engineering, etc. This, of course, is not what is meant. I do mean, however, that the business of the university is coming to be more and more the supplying of that specific knowledge and that specific training which shall fit the individual for his calling in life. Just how the tendency shall work itself out on the formal and external side is a matter of comparatively little moment. The fact is sure that the intellectual and moral lines, dividing the university courses in science and letters from those of the professional schools, are gradually relaxing and are bound finally to fade away. All of us have callings, occupations—only the luxuriously idle and the submerged idle, only the leisure class of fashion and of pauperism, violate this law. When education ceases to ignore this fact, when it recognizes it frankly and fully, and adapts its curriculum and methods to it, the university will be coherent in itself and also doing what the people really want.—Extract from paper read before the Association Harvard Teachers.

WANTED—A TEACHER.

BY JAMES H. CANFIELD,

Teachers' College, New York.

Not a pedagogue—the mere slave of the student; but a teacher, "one who is a combination of heart and head, and artistic training and favoring circumstances." One who has that enthusiasm which never calculates its sacrifices, and is willing to endure all things, if only good may come. One who loves his work, and throws his whole soul into it; who makes it his constant beloved companion by day and by night, waking and

sleeping; who catches from its very barrenness of outlook, an inspiration which quickens the blood in the veins; one who faces its difficulties with an indomitable temper. One who can change the shambling and uncertain gait of the average student into firm and definite and well-ordered activity.

One who can take that nebulous, filmy, quivering mass which a boy's family and friends kindly call his brain, and give

it clearness of outline, and toughen its fiber, and make it lithe and sinewy. One who tries to clear up a bewildered brain; who has infinite patience and pity for the weak; who will not suffer them to be crowded to the wall; who believes there is more glory in the salvation of the one stupid and slow than of the ninety and nine who need not a master. . . . One who can develop the spiritual side

of a boy's nature, his character, the man in him, the man of feeling and emotion which can and will dominate both mind and muscle. One who in all this will do little more after all than help the lad to help himself; will do it all through him and largely by him. One who can teach the boy how to get life—a far grander thing than to get a living.—Educational Review.

EGOISM AND ALTRUISM AS ORGANIC FACTORS IN EDUCATION.*

BY DR. ARNOLD TOMPKINS,
President Chicago Normal School.

The most fundamental, the most pervasive, fact man can discover in his own life is the simple truth that he is at war with himself. Man can think of himself as other than he is. He can think of himself as he ought to be, in contradistinction of what he now is. Man sets up an ideal and then is drawn irresistibly toward it. Man cannot set up an ideal without responding to it.

Because man can set up the ideal and because he is drawn to it, he does not mount joyously to the stars without effort, for there is a downward pull in human life. Life is polarity. There could be no such thing as an upward tendency in human life if there was no such thing as a downward tendency in it. Without an up you cannot have a down; without a hell you cannot have a heaven. Whatever there may be of disappointment, or stress, or strain in human life, comes like a blessing to every one who can overcome it. Man has but one single duty, and that is, to hold on to the better self; he has but one thing in life to do, and that is, to do all that within him lies to realize his highest possibility.

Self-realization and not self-preservation is the highest law of life. Man has but one duty, and that is, to be true to his better self. "To thine own self be true, and thou canst not then be false to any man." Man has but one thing for which to labor. There is but one North star to guide him, and that is, to be true to his own nature, to be true to the best that is in him.

We can easily conceive that if man by nature is a devil, the very best thing he can do is to play the game well. I am sure none of you will argue that question with me. But to be true to the self and realize the self, is all that man has to do in this world. I am sure that if you could find a man who is devoting all his energies, all his powers, to realizing the best that is in him, you could make no criticism on his conduct.

I comprehend full well the other side of this question: that man cannot realize his ideal by simply standing before it and admiring it. He must forget himself in order that he may realize himself. If he wishes to grow in kindness, he must not do a kind deed and then turn away thinking how that kind deed is aiding him in his development. He must lose himself completely in the one upon whom he performs the kind deed. If the teacher says to herself: "I lack sympathy;" and then gives the child a toy and goes forth saying: "That is good for me; I am growing in sympathy. She grows only in selfishness." Unless that teacher lose herself in the child, she will never find herself there. If she says: "I am lacking in charity;" and gives the widow her gift and then goes home and says: "I am growing in charity;" she is not growing in charity, but is growing more selfish. There are a good many religious people who are always turning in and asking: "How fares it with thee, now, my soul?" It would be a good deal better if they sometimes forgot they had

a soul and would go forth to save a dying world.

Never did man rise to mortal sublimity or to eloquence in this world in any other way than that of self-forgetfulness in a good cause. When Wilberforce was trying to free the slaves and was asked why he did not pay more attention to the salvation of his own soul he replied: "Madam, I have been so busy with the welfare of these people that I have forgotten I had a soul." You may read the history of oratory and the biography of sublime characters all down the centuries, and you will find that there is always one thing that marks these sublime characters; and that is, this ability to completely lose themselves in some great problem of life.

Altruism is not merely personal. When Lincoln turned back to put a little bird in its nest, he was exercising as general an altruism as we are when we go forth and supply the needy. When Charney bent over the flower to protect it from the hail, taking the storm upon his own back, his sympathy was a genuine case of altruism. When you water the flower, when you turn the clod from the little struggling plant, it is a genuine case of altruism. When a man oils his machinery to keep it from squeaking, it is true altruism. The farmer who leaves his machinery out to rust in the inclement weather is stupid and dull. He lacks sympathy—a scientific sympathy. We often complain of the farmer for not taking better care of his implements, saying: "How improvident he is!" But that is not the only charge against him. He is an unsympathetic wretch or he would give these implements, as well as his cows and horses, a better housing. In short, man cannot shake off the feeling, if he would, that everything about him has a life akin to his own.

The child personifies everything. This is natural to it. The savage explains everything—the river, the woods, the mountains, the sun, moon and stars—by putting a life into them like his own, and the poet could not write a line on the poetry of nature except on the assumption that back of these natural forms there is a spirit akin to himself.

"There was a time when meadow, field
and stream,

The earth, and every common sight, to
me did seem

Appareled in celestial light."

This is not only true for children, savages and poets—all of whom should be classed together—but it is true of the hard-headed, theoretical man. The old farmer goes out at night and runs his head against a post, and challenges the post to argue the right of way with him. I have known ministers and philosophers, who, when trying to put up a stovepipe, to use adjectives upon that stovepipe which could only be explained upon the theory that there is a little bit of kinship between the philosopher and the stovepipe.

Altruism extends to truth itself. I believe Herbert Spencer was as altruistic in his search for truth as was Howard when he devoted his time to the English prisons. Emerson was distinctly altruistic. He would play with the children on the street. They loved him. But they had not any use for Hawthorne, because he was a shy man and preferred to get behind the somber pines and work out his problems. But certainly he gave us *The Scarlet Letter*, the *Mosses from an Old Manse*, and other stories, in an altruistic spirit. And so this seeking after truth, this feeling of kinship, as it were, is a universal and a fundamental fact of human life.

I stated at the outset that man felt a split in his life. But there is another split, and that is the split between himself and the world. Why, you people who swear by Froebel—I do not (it is not *Froebel* I object to, but the *swearing*)—know that he pleads for these two unities: unity within the man himself and unity with the world about him. There is no other rock-upon which to build our pedagogical church.

Everything exists in something else. One thing lives in another thing. A thing cannot live to itself alone any more than a person can. Talk to the finger, and ask what is good for it, and it will tell you to consult the hand. Talk to the hand, and ask what is good for its welfare and it will tell you that in and through

the fingers its well-being is sustained. Thus, also, the plant lives through the soil. The whole universe is put under tribute to the plant and the universe is what it is by reason of the plant life. The whole world is held together in this way. And this is the larger principle of which I speak, when I say we all must live in and through others, and that other things must live in and through us. The whole world, the world about us, in plant and animal life and in the mineral world, is altruistically constituted. And so is the social world.

In this world of selfishness and avarice, where sharpest competition reigns, even there the law of altruism works. In a strange city you may want your watch repaired. You walk down the street; and pretty soon you find a sign hanging out, so plain that a wayfaring man though a pedagogue need not err. That kind gentleman put that sign there in order that you might not have to go to extra trouble to hunt a watchmaker. And so you ride your wheel down the avenue and want to do some shopping. You come in front of the store and find that the kind-hearted gentleman who runs that store has put a wheel rack there to protect your bicycle while you do your trading. I knew a little boy who felt that the mail carrier came to his house to accommodate him, and that the policeman stood at that dangerous crossing only to protect him. The little boy always took off his hat to the mail carrier and the policeman; and I tell you the little boy was more nearly right than are we. You may go on a fine train which runs from here to St. Louis, and you will marvel at the convenience, the accommodation and the luxury that there is in it. How did this happen? Suppose it were undertaken by any philanthropic body to make comfortable travel between here and New York city, would it ever have been as convenient for your comfort as it is now? I suppose it never would have been done. I think that this legitimate competition is a true way of altruistic working. The man who can best satisfy my wants, who has the wisest discernment in the matter of selection, and who has the courage and the financial resource to back his wisdom, is the man who ought to get my trade.

No business can succeed except as it comes over to the individual for whose trade it competes.

But once more. There is never any difference between altruism and egoism. Think of the young lady who stays at home and waits on her invalid mother. She is sacrificing her life for her mother. Tell me, what would happen if she deserted her mother? Is it not her own self-respect and the necessity that she is under to guard the integrity of her character, that makes her stay by her mother? You say that you pay your debts; you must be just and true to other people. I am sure you ought to pay your debts. But the greatest reason that I can think of for paying your debts is found in the law written upon your own hearts. I don't owe it to any certain man more than I owe it to myself to pay the debt.

Man can love his neighbor just as he does himself. The measure of self-love is simply this. If I love myself as I should, I will do nothing to mar the joy of that self. And, on the other hand, I will do everything that I can to further the interest of my higher self. I will do nothing to hinder my neighbor in the process of his own realization, but I will do everything in my power to aid him in that realization. Thus interpreted, man can and ought to love his neighbor just as he does himself. The law does not mean that when you earn a dollar you ought to give it to your neighbor. Because, if that were true, then your neighbor ought to give that dollar back to you. And it would be better economy if, instead of shuffling dollars between you, you would go ahead and make some more dollars. It does not mean that if your store and his are on fire that you should go over and save his goods. For then he would have to leave his store and come over and save your goods, and the end would be that you would both be so mixed up that both stores would go up in flames.

Now I believe that there is a law which governs this organic union of altruism and egoism. Altruism, pure and unalloyed, will not work for a moment. How easy it is to give a man a dollar! Yet the law of altruism would forbid him to take it. The question is: What is good

for the two at the same time? Every true and disinterested altruistic service in this world is a service not only for the other, but a service in the development of the self. In the harmony of this world, it would be a strange thing, would it not, if the two laws—the law for the welfare of the other and the law for the welfare of myself—were set over against each other. When you tell me that I ought to do so and so for the other, then I wonder who that other fellow is. If it is worth while for him to realize himself through my efforts, then it is worth while for me to realize myself through his efforts.

But I must come quickly to the question: How does this law apply in education? That is what I came to say. Here is the last thing to be said about it.

The fundamental craving of the human soul is for more life, and that life it expects to receive by communion with the life above it. The soul wants these things to fill out and to fulfill its life; and here is the fundamental motive to all study. Why does man think? He must think as he must breathe or die. Thinking is the altruistic process with the egoistic meaning. You studied history because you had to have more life, a larger life. You studied the history of Greece; and you are Greece just to the extent you have mastered this history. You are Greece, Rome, France, Germany, you are the whole thing, just to the extent you have mastered them. If you have put Greece into your life, or Rome, or France, or Germany, you have not any less room for the United States, but more room. That is, the fuller the

soul gets, the more room it has. It is infinite in its capacity.

Now, why do the pupils study? Why do we teach things in the schools? Is it worth while to do it? Does it pay to do it? The reward is in the doing. You sit by the ocean. You hear the song of the waves. You do it again day after day, and you know that it is worth while to do it, for the soul must peep into its own infinite. There is no other reward.

Knowledge is its own reward. If the pupil is going to solve his problem in geometry, will he do it for the chum that sits by? I hope not. God geometrizes from all eternity, and I would not want the child to prefer his chum to the infinite God. I say that it is a vicious doctrine if I take a trusting child and try to make him believe that he is doing a thing for something he is not doing it for. You tell me that a child does things for his mother. True; but there is an infinite deal of things that a child does *not* do for his mother. He does them because his own infinite life demands it of him. He may think of his mother and he may not. I say that it is a vicious doctrine of altruism that a child may not be personal in his motive. Do not ask the child to do things because of his chum or for some other similar reason. You will never find him moved by these things. He is drawn by the infinite life, and the teacher can do no better than to put him in touch with the life he craves at every point. This is the only way the child can grow and become perfect even as the Father in heaven is perfect.

*From an address before the Chicago International Kindergarten Union.

AN ENEMY.

By A. E. WINSHIP.

The teacher who is primarily a teacher, as President Eliot and Seth Low are not, suffers more, sensitively, from his enemies than any other class of persons. Fortunately, tenure of office is now so general, that, aside from superintendents, teachers are not financially jeopardized, but they cannot comfort themselves

by hitting back, as a clergyman can; for though defeat is inevitable to a preacher who is only a preacher, he has the luxury of freeing his mind in the pulpit and from house to house, as a teacher has not. No tenure on earth could be so taut as to save a teacher who should strike back. One of the highest salaried principals

in Boston, after years of eminently successful teaching, spoke of a member of the board who annoyed him as a "cobbler," and at the next election there was not a vote for his retention.

Less and less do enemies harm any one, and more and more do they prove helpful. Cartoons and yellow journalism have made it so easy to attack every man that all enmity is harmless, and in proportion to the publicity of attack is the friendly value of an enemy. The weakness of the clergy and the teachers lies in the fact that their enemies are

not in the open. Cartoons and newspaper ridicule, if they were general, would place them in the class with politicians and literary people, as to the value of enemies.

Finally, the theory of evolution makes enemies a necessity. In no other way could there be a survival of the "fittest." In every field of human endeavor, as well as in nature, it is true that only the fittest survive, those who prove themselves more fit than those whose envious or jealous natures make them serve as an enemy.—New England Journal of Education.

THE IDEAL SCHOOLHOUSE.

By DR. WM. H. BURNHAM.

Assistant Professor Pedagogy Clark University.

A very brief description of this actual ideal, as we may call it, would be as follows: This schoolhouse is situated on a slight elevation, the soil is natural, sandy, free from organic impurities and well drained. No high buildings, noisy, dirty or ill-smelling industries are near it. There are large grounds containing a school garden, shade trees, playground, etc. The building is entirely of masonry and steel construction, built of the best glazed brick, and practically fire-proof. It is two stories high and built around a large quadrangle. At the grade level a granite damp course surrounds the building. The outside walls contain an air space, and the outside faces are coursed with hollow brick, making the walls impervious to moisture. All interior wall and partitions are of solid brick. The floors are framed entirely with steel girders and beams. Wide iron stairways, of easy ascent, connect the several floors.

Heating and ventilation are by a combination of the so-called plenum and exhaust systems. Large tubular boilers in the basement generate steam that is circulated through vast coils of piping placed between the cold air room and the fan room. On the north side fresh air, received from a court supplied with air from above the ridges of surrounding roofs, is warmed by passing over the steam pipes to a temperature of about 70 degrees Fahrenheit, and forced by

the fans into the main duct, which extends the length of the entire building, between the ceiling of the basement and the first floor; from this it passes to vertical shafts, and is introduced into each room through registers in the wall. Steam coils, controlled by thermostats regulating the temperature, are placed on the exposed sides of recitation and study rooms for use in extreme weather. The humidity is also tested, and steam mixed with the incoming air when too dry. Two hundred and fifty cubic feet of air space is provided for each pupil, and thirty-five cubic feet of fresh air is supplied each pupil per minute. Distribution of the warm air and ventilation are ensured by exhaust fans placed near the top of the ventilating shafts, and the foul air is drawn from each apartment. The arrangement of the warm air registers and the foul air outlets in each room is made with regard to the best distribution of the fresh air, in the recitation rooms the inlets being placed eight feet above the floor, usually on an interior wall, and the outlets near the floor on the same side. The main horizontal duct for warm air extends under the whole of the assembly room, and fresh air is introduced by a register under each seat, while the outlets are at the top of the room.*

*This method is in successful operation in the Colonial theatre in Boston.

In the basement, besides the heating and ventilating apparatus, are store rooms, play rooms, gymnasium, shower baths, toilet rooms and ventilated lockers for the wraps of each pupil. The plumbing is all open, the sanitariums of the best modern style and ventilated through a special exhaust duct. The light in the class rooms comes from the left, or from the left and rear, and is regulated by curtains of neutral gray green running up from the bottom as well as letting down from the top. All the exit doors open outward.

Especially noteworthy are the arrangements for cleanliness. The fresh air introduced to the heating apparatus is filtered through a screen of cheese cloth so that dust and other impurities are removed before it enters the fan room. The school rooms are really cleaned every day. There is no sweeping or dry dusting. The hardwood floors are cleaned every night by a carpet brush dipped in a special oil preparation. The oil makes the dust adhere to the brush, and in this way it is not stirred up, but removed from the room, and the floor is improved each time it is cleaned so that once a week it can be washed thoroughly without injury. At intervals the floors are disinfected. The furniture is wiped off with a moist cloth. The chalk dust is reduced to a minimum by the use of the best crayons and by cleaning the blackboards, and the little dust made is caught in removable troughs. Thus each morning the children come into a schoolhouse actually clean. There are no free text-books used promiscuously, no slates and no drinking cups; but on each floor is a drinking fountain where the children can drink from a continuous stream of water without the need of cups. Wire matting at the doors, individual lockers for wraps and the facilities for bathing do much to insure clean clothing and clean children.

Space is lacking to describe details, but among other special features are the following: Electric lights in all rooms, telephones connecting each room with the office, chemical fire extinguishers in the corridors, adjustable seats and desks, special emergency rooms, and toilet rooms on each floor, and in the play

rooms in the basement warmed platforms where the children can sit and dry their clothing in wet weather.

Hygiene is regarded in grading the school, in the arrangement of the period of study and the like. Physical condition, as well as scholarship, is considered in the questions of promotions, and pupils with pronounced physical or mental defect are taught in a special school. The teachers devote half their time to class instruction, the other half to helping their pupils as individuals. There are outdoor recesses for free play and occasionally short pauses to relieve the strain of work at the discretion of the teacher. The aim, in general, is to make the conditions such that pupils may put forth their greatest effort and work at a high pace while in the school room. Special physicians inspect the children every morning; dentists examine their teeth periodically; experts test their sight, hearing and general condition; and perhaps most remarkable of all, a skillful engineer and an intelligent janitor have care of the heating, ventilation and cleanliness.

Every feature of this ideal—it should be repeated—is embodied in some existing schoolhouse. As it takes the virtues of many men to make the ideal man, so it takes many schools to make the ideal school. But if we could bring together and combine in one all the good features found in many schools scattered throughout the country; we should have one almost ideal in hygienic excellence, an ideal which, if not perfect, would have the merit of being real and all the influence of concrete example. It is surprising how good this composite schoolhouse is. Its excellence condemns the ordinary schoolhouse as no words could. It shows, too, the progress of school hygiene. Ten years ago cleanliness in a school room, adjustable seats and desks, school baths and the like were vagaries of university theorists; now they have concrete embodiment in the best schoolhouses. It will, of course, be argued that the cost of such a model schoolhouse makes an approximation to it impracticable. The natural answer to this objection is that any community that will weigh the health of the children against

dollars and cents must be the product of a perverted system of education. But, if it be necessary to argue the question on a financial basis, the economic value of hygiene can easily be shown. Not only does the work of teachers and pupils lack efficiency when the conditions are unsanitary; and not only when disease is prevalent does the community have to pay for services that are not rendered because the pupils are absent from school, but epidemics are most expensive, and acute or chronic disease among the children of a family is the one cause of expense that drives the sober workman to despair. The citizen with economic perspective will demand that the conditions in the school as well as in the home be made hygienic. And if the essentials of hygiene were considered first and ornamentation second, the cost would often

be no greater than at present. It should be noted also that defective schoolhouses are very expensive. A most serious waste of public money is often due to an ignorant or criminal policy of building schoolhouses before devising the plan of heating and ventilating them, of rejecting the economical mechanical system of ventilation by fans because the initial cost is greater than that of a natural system, and, finally, of installing an elaborate and costly apparatus for heating and ventilating and entrusting it to an ignorant janitor or broken-down politician.

Just the particular plan of schoolhouse described here is not, of course, suited to all localities, but the same principles—primary consideration of ventilation, cleanliness and the like—are valid everywhere.—*World's Work*.

SCHOOL LIBRARIES.

BY HON. ALFRED BAYLISS,

State Superintendent, Illinois.

A paragraph in section 27, article V, of the school law provides that school directors "may appropriate, for the purchase of libraries (and apparatus) any school funds remaining after all necessary school expenses are paid." There is just a faint suggestion—perhaps the shadow of a shade—of something resembling irony in this language of the law. It may have escaped the attention of the directors of the five thousand schools yet without libraries, but the thousands of teachers, who by every conceivable form of self-help, from a pumpkin pie sociable to a high-grade lecture or concert, have raised a little money for the book fund, have not failed to notice it. The children in the districts where the pupils give the school room its annual scrubbing, and turn the money paid them by the directors for it into the book fund, or the children in the district where they cultivated a vegetable garden one year and applied the proceeds in the same way, could point out the defect in that provision, and insert the right word in the right place. They have learned that a library is a necessity, and not some-

thing to be provided after it appears whether there is going to be a surplus.

The library is a necessity. The school is not furnished without it. After provisions have been made for light, warmth and ventilation in a school room, it may well be provided with seats and desks, provided the purchaser does not forget that they are for children of different sizes. So much having been done, the library takes precedence of all other necessities, even the blackboard. No school is well provided if it is without a library. It may be questioned whether it is a good school. It most certainly is not the best possible school, and nothing short of that ought long to be good enough for any district in Illinois.

The activity on the part of teachers in providing ways and means where there have been "no school funds remaining," has been one of the noteworthy characteristics of the last two biennial periods. More than 203,234 books have been procured, most of them by extra-legal methods, within the last four years. It is pleasant to note, also, that in very many cases, when the teachers and chil-

dren have put their shoulders to the wheel, and begun in earnest to help themselves, Jupiter, in the guise of an intelligent school board, has come forward with assistance. In many counties there are districts in which the directors systematically appropriate as much money without waiting to see if there shall be any "remaining"—as the school raises by its own efforts. This work has been encouraged by all teachers' associations, great and small, and has been promoted by nearly every county superintendent, and by the state department. The crusade for books will be continued until every school in Illinois has its working library of reference books and a collection of good books to read at home.

This country has committed itself to the proposition that every child shall be taught to read. To that much there is no alternative. But merely to teach him to read, is to stop far short. The power to read gives its possessor "access to the universal mind of man." That is a great thing. But it is putting in his hands what, if undirected, may prove to be a means of culture or degradation, and it is almost as likely to be one as the other. The power to read is like a ladder. By its use one may ascend to the heights, or descend into the dampness underground. No system which gives a child the power to read and omits to cultivate his taste and power of selection is sufficient. The school is as much bound to teach even young pupils to discriminate as it is to teach them to spell out the words. More. That is why a collection of the right kind of books for this purpose is part of the working outfit of a school. Some wisely directed reading is needed, too, to reinforce the training of the studies. Books multiply ideas. They give breadth and poise to the mind. They enlarge resources. They stimulate

mental ambition. They educate the conscience.

The systematic improvement of the reading of the people is second to no civilizing agency in scope and power. The district school library, used under the guidance of an intelligent teacher, may be made a fountain—Valclusa-like in its dimensions, it may be—but a *source*, nevertheless—of life, of mental health and moral strength. It is demanded of the schools that they produce good citizens. They are for that purpose, and can be justified on no other ground. By no other agency can the schools do so much to inculcate the love of liberty, truth, patriotism, piety, patience, reverence, philanthropy, fortitude and all virtues, or to subdue all passions—to "hold fast to the man and to awe the beast," as Emerson puts it—as by the right use of the right kind of books. The textbooks merely inform. Good literature inspires to fuller life.

I, therefore, most earnestly recommend legislation to encourage the smaller districts to establish and aid them to maintain suitable school libraries. Such legislation may well take the form of a small annual appropriation to every district which first does something for itself, whether by appropriation of district funds by the directors or by any of the means now so much in vogue, or both, and should, of course, be conditioned upon the selection of the books purchased from an authorized list, and the making of specific provision for their care.

A bill has likewise been introduced in accordance with this idea. Such a statute, I am sure, would be followed within a year by definite provision in more than half the county institutes for instruction in the selection and right use of a school library. Nothing is more needed.

ART AND EDUCATION.*

JOHN E. CLARKE.

A country's art, like all its other developments, must be based primarily upon the characteristics of its people. Where all are judges of art, great art-

ists arise, just as great warriors among nations of soldiers, so that until the common people know the language of art and can comprehend the meaning of line

and color and form, the artist is as much out of place and as little to be looked for as a great author would be among a people ignorant of reading.

Nor has it ever been otherwise. The history of art is the history of peoples. Nor is there anything little or common in the eyes of art. The people that produced great buildings, fine paintings and noble statues had also the most exquisite household utensils. Their commonest articles, whose fragile beauty has outlasted the centuries, to-day, with subtle grace and perfect form, tease the eyes of the artist and challenge in vain our most skilled artisans to reproduce them. The antique Eastern dish of burned clay is held by the modern connoisseur as of more worth than its weight in silver, yet it was once in as humble and universal use as the commonest crockery of our kitchens.

Great collections, museums, art galleries, much as they may contribute to the self-satisfaction of cliques and cities, will be of the slightest possible value and barren of results, either upon the industries of the people or their art cul-

ture, so long as drawing is not generally understood.

Whoever succeeds in having all the public school children of the country properly trained in elementary drawing will have done more to advance the manufactures of the country and more to make possible the art culture of the people than could be accomplished by the establishment of a hundred art museums without this art training. Just as libraries are worthless to those who cannot read, so are art collections to those who cannot comprehend them; just as all literature is open to him who has learned to read, so is all art to him who has learned to draw, whose eye has been trained to see and his fingers made facile to execute. We have begun at the wrong end; -we asked for art galleries when we needed drawing schools. But the evil is not irremediable. Let drawing be generally taught, and our art galleries and museums, poor as they are, will at once grow more and more valuable, for they will then begin to be of use.

COUNTRY SCHOOLS.

BY JAMES GREENWOOD,

Superintendent, Kansas City, Mo.

Dr. Baldwin and I passed through Scotland county, Mo., on a lecturing tour during the summer vacation of 1868. Our plan was to send out announcements two or three weeks in advance, stating that we would be at a certain church, village, town or city on a certain date, and talk to the people on the "Educational Needs of Missouri." The circulars were tacked up by the postmaster or some other person in the neighborhood, and we always had good audiences, even in harvest time.

We especially invited the young men and young women, school directors, ministers, doctors, and especially those young men and women who wished to become teachers, to be present.

We spoke in the evening, except on Sundays, when Dr. Baldwin preached (which he called "bushwhacking") in

the forenoons, and I lectured on moral education in the afternoons. For six summers we traveled hundreds of miles through the counties of north Missouri during each vacation, talking to the people. I carried a small hammer, tacks and nails, and I nailed up hundreds of circulars along the public roads, so that we could be tracked by them alone. Some of the other professors traveled and lectured. It was on one of these trips through Scotland county that we came to a schoolhouse where four cornfields cornered at the intersection of two roads. Dr. Baldwin sat in his buggy in the shade of the trees while I went to the schoolhouse to see the teacher, leave some circulars, and inquire if she knew of any young persons in that neighborhood who intended to go to school. The little children were off some distance from the

schoolhouse, playing along the road in the shade of the trees, but not so noisy as thirty or forty youngsters are likely to be at noon time. It was nearly 2 o'clock in the afternoon. As soon as the children saw me coming they hastened to meet me before I could get to the schoolhouse. I imagined that something had happened that caused the teacher to dismiss school, but all the children came forward, and when one of them said, "Mister, you won't go up to the schoolhouse, will you?" I said, "Why?" Then several replied, "Our teacher's beau came to see her last night, and she sat up late, and now she is asleep, and we want to play!" I asked the teacher's name and the name of the schoolhouse, and then told them that I would not wake her; but I walked to the schoolhouse, entered noiselessly, and left a written message and package of circulars for her. Then I slipped away without arousing her. Poor girl, she had found the duties of the day too exacting to keep awake during the hot noon hour in July! The children asked me "if I waked her," and I said, "No, she is tired out, but you tell her that Mr. Greenwood called to see her."

The last country school I visited was in April, 1899. The teacher had a room filled with children. When I entered a class of eight little boys and girls were reading in the second reader, and they read their lesson well. The teacher had been teaching them somewhat beyond what the grade teachers would undertake with pupils of corresponding attainments.

She asked me if I would like to hear a grammar exercise, and I told her that I should be delighted to hear it. She then said: "Class, what is a noun?" They raised their hands and the answer was correct, according to grammar. Then she called upon different members of her

class to name some nouns. Each mentioned two or three objects as nouns.

After the questions and replies had been given I asked her to let me question the class. She was glad to do so. The little fellows stood up squarely on their feet with heads thrown back, ready to be questioned. I began with a boy 7 years old by asking him if he had ever seen a noun. He said, "Yes, sir, I saw one the other day." I said, "Where was it?" He replied, "Up a tree." "What was it doing up there?" "It was hopping around." "Well, did it hop up or down?" "It hopped up and down both, and it sometimes hopped around." "What else was it doing besides hopping up and down and around?" "It was picking up something every little bit." "What was it picking up?" "I did not know, but I think bugs and ants." "What color was this noun?" "It was black and red and white." "What do you think it was?" I asked. He replied, "I think it was a sap-sucker, but it may have been a young woodpecker." After this choice bit of information had been obtained, all the little children in the room wanted to tell me of nouns they had seen, but I changed the current of their thoughts into another direction by requesting the teacher to write her name on the blackboard, which she did in a plain even, hand. I asked them, "What is a noun?" They responded correctly. "Now," I said, as the teacher stood near me, "which is your teacher, the name on the board," pointing to it, "or Miss Jackson?" (for that was her name). "Miss Jackson is our teacher," they said. "Now, which is the noun?" All said, "Her *name*," and thus they got a clear glimpse of the difference between an object and the name given to an object, and I left the subject to find its way through the teacher's mind.—Educational Review.

A GREAT NEW MOVEMENT IN EDUCATION.

BY WALTER H. PAGE.

If one were obliged to say what subject, apart from our great industrial activity, is now uppermost in the minds of thoughtful men, he would say Education.

It is the season when a very large part of the population visits schools and colleges, when gifts to them are added up and announced, and when visible evi-

dence is given both of the earnestness and of the diffusion of interest in the subject.

It would be an impressive spectacle, if one could see at a glance the whole prodigious educational activity in the land. The colleges never before had so large an attendance; nor the professional schools, except the schools of theology; nor the technical schools; nor the public schools. But more impressive than the mere magnitude of the work is the undoubted improvement in method and the very great extension of special forms of work—the development of technical education for instance, and the wonderfully

rapid extension of manual and industrial training (as a matter of mind-culture as well as hand-culture). This last indeed is the most striking single fact in present educational progress. It seems to have been clearly demonstrated that pupils who are taught to do things with their hands do better work also with their minds than those who do not have manual training. The most noteworthy movement in educational work in the near future seems likely to be based on this fact. It is a movement straight toward common sense and toward the strengthening of democratic character.—World's Work.

A NEW WORK IN EDUCATION.

In the latest number of *The Educational Review*, the editor of that alert periodical calls attention to the new duties in the direction of education that are laid upon the government of the United States by the acquisition of the Philippines and Porto Rico. It is true that these duties are of the same nature as those imposed in Alaska and the Indian territory; but they are on so much larger a scale that the inadequate means employed become more plainly ineffective.

This question was taken up at the session of the National Educational Association at Charleston last July, and a recommendation was made for the reorganization of the Bureau of Education in such manner as to meet the new situation. The association urged that the bureau should be erected into a department on a plane with the Department of Labor. This *The Educational Review* regards as premature action, which may "wisely be postponed until public opinion on the subject is better informed and more clearly formulated." All that is immediately required, in its opinion, is provision for two divisions in the bureau, one of statistics and reports, to do substantially the work now done; the other of supervision and administration, to take up the general oversight of the school systems in Alaska, the Indian territory, and the new dependencies. This

would involve the appointment of an assistant commissioner for each of the divisions and a decent appropriation for the salary of the commissioner, which is now only \$3,000. The total present appropriation for the bureau is but \$100,000. The Review thinks that the bureau could be prepared to take up the beginning of the new work satisfactorily for twice that sum.

We do not question that this is the logical outcome of the situation created by the extension of the sovereignty of the United States and the assumption of new responsibilities, of which that relating to schools is certainly among the most serious. Indeed, it may be said that the proper dealing with the schools is the absolute condition precedent to any reasonable and lasting solution of the political problems presented to us. It is too late in the day to urge that the agencies for doing this cannot be provided without violating the traditions of the government as to centralization. No government can be conducted vigorously, wisely and safely on traditions only, when the actual situation no longer conforms to them. It is as consistent to organize the National Bureau of Education so as to handle the work of education as it was to create a federal commission to deal with questions growing out of interstate commerce. Our forefathers

schools in the antipodes any more than they foresaw American railways to the Pacific coast.

Nor can there be any reasonable question of the advantage—the imperative need, indeed—of a careful central supervision and administration of education. It is true that the conditions differ widely from Alaska to Luzon and from Porto Rico to Mindanao, and great respect should be paid to individual or race

characteristics as they develop. But there is, nevertheless, a science of education. That is to say, there is a body of digested knowledge which is generalized, which furnishes guidance for all work, and cannot be disregarded in any. The Bureau of Education has done much to promote the evolution of this science, and, properly recognized, can do much in its application.—New York Times Saturday Review.

IS TEACHING NARROWING?

BY ALBERT LEONARD,

President Michigan Normal School.

The question whether teaching has a narrowing effect upon the intellectual range and sympathies of those who devote their lives to the work of instruction in school or college is generally answered in the affirmative. But there has never seemed to us any reason for the belief that the reflex influence of teaching is more likely to be narrowing than that of law or medicine or theology. Some teachers, it is true, even early in their career, show unmistakable evidences of arrested mental and professional development. Others show themselves pedantic or conceited, with a contracted intellectual horizon. All this is pathetic enough. But it remains to be proved in most cases that these deplorable effects are due wholly to the reflex influence of teaching. It is our own conviction that the real cause for this narrowness of intellectual sympathy is to be found in lack of capacity for growth and in the barrenness of the environment in which the intellectual ideals of those teachers were formed who show signs of the narrowing influence of the teacher's life. For just as there are some minds that are knowledge-proof, so there are some intellects that seem to be devoid of that state of receptivity that marks the broad-

ly educated man. There are teachers in school and college whose range of vision seems never to enlarge. In spite of the liberalizing influence of a course of study in a higher institution of learning, we now and then find college-bred teachers who set up their own narrowness as the standard for the rest of the world, and who confuse their own small conceptions of the significance of life with the divine revelation of the truth. Openness to truth, the desire to know the best that has been thought and done, freedom from bias, are the invariable marks of that largeness of character which distinguishes the man of culture, and it is not surprising that among teachers there are found men and women who have come to identify their own circumscribed horizon with the outermost bounds of the universe. That insufferable conceit and satisfied self-assurance which now and then are found intensified in the teaching profession can just as easily be found in other vocations, for there are shriveled souls in all professions. It has always seemed to us, however, that the conditions of the teacher's life are such as to bring a richer and fuller intellectual life as the years increase.

OUR COLOR SUPPLEMENT.

EDWARD B. CLARK.

THE ROBIN.

The golden rod many people think should be named as the national flower because of its wide distribution. The robin for the same reason might be named as the national bird. The robin's ringing spring song, his confiding ways and his marked colors have made him known throughout the country. He has the characteristics which make our ideal American citizen. He is a cheerful and patient laborer, a good husband and father and is brave in defense of robin right.

The early American settlers gave old country names to some of our birds because of fancied resemblances to the songsters they knew at home. It was in this way that our robin was named. As a matter of fact, he is not a robin, but a true thrush. In many ways, however, he is unlike his brother thrushes, and sufficient excuse might be found to put him in another family. The song of the robin contains the essence of good cheer. The songs of the thrushes are tinged with melancholy. The robin is our own familiar friend. The thrushes treat us as strangers.

The robin and the bluebird are rivals for the honor of being the harbinger of spring. They both arrive early from the southland and it is not a rare occurrence to hear the notes of both birds before the snowdrifts have melted in the fields. Occasionally the robin remains in the north all winter, seeking the shelter of a warm, close-growing cedar swamp. When he stays his food consists largely of the cedar berries, a diet that is varied slightly with the larvæ of the larger insects. In the summer earth worms form the greater part of his food, though he has a well-known weakness for fruit. This habit of fruit eating at times gets the robin into the bad graces of the farmer. It is only fair to say that the good that the bird does outweighs the evil.

The robin's mate wears a dress that is a subdued color copy of her husband's attire. Sometimes the pair will bring up three broods of young in a single sea-

son in the mud and dry grass nest which they fearlessly place within sight of our windows.

THE MEADOWLARK.

The scientist tells us that the meadowlark, like the robin, was not baptized aright. In truth, the bird is not a lark at all, but a starling. Nevertheless it always will be a meadowlark to the people, for its haunts and habits of life make the name fitting.

In the parts of the country where the meadowlark is not molested it is a fairly familiar bird. In the spring while hunting with his mate for a nest site, the male meadowlark stops work occasionally to mount a fence post and utter his clear, sweet, whistling note. He sings to his sitting mate until the young appear and then song is forgotten in the labor of providing for a hungry family. An attempt was made recently in the Illinois Legislature to put the meadowlark on the game list. The farmer members said that the bird was too good a friend to be shot for pot pies and the bill never went beyond a first reading.

Meadowlarks are hardy birds and some of them remain north in favorable localities all through the winter. The flight of the bird, with its alternate flapping and sailing, makes it look like a miniature prairie chicken. It is almost entirely insectivorous in habit. The numbers of grasshoppers destroyed by the meadowlarks in the course of a season are almost beyond computation. In parts of the south in winter the meadowlarks change their habits to some extent and the northern visitor often is surprised to see flocks of the birds feeding in the woods.

The meadowlark, like its cousin blackbirds, is a walker. This characteristic, taken with the bird's striking coloring, make easy its identification. It nests upon the ground in a place where a grass roof is obtainable. The white eggs with their cinnamon spots are laid about the middle of May, and a month later the young are to be seen foraging through the fields.



ROBIN.
Life-size.

COPYRIGHT 1920, BY A. W. HENDERSON, ENGLAND

OF TREES AND NATURE STUDY.

By JULIA E. ROGERS,
Cornell University.

"I am sorry for you," wrote the outgoing teacher to her successor. "The past year will always be a nightmare to me. Maybe you have more endurance than I. But I warn you beforehand that the Hyrcanian deserts and the vasty wilds of wide Arabia can furnish no horde more awesome than the little savages you will find in Room 7. I wish you joy of them!"

This note introduced the new teacher to her charge. She showed it to me at the close of the summer Institute, and asked me what work she should attempt in Nature Study. I said: "Take trees. A half-grown boy wants manly subjects, and he wants to tackle them manwise. Trees have bigness, and strength, and a fine air of lofty indifference. These qualities challenge the attention and admiration of boys."

There was a look in her eyes that I liked. "Write me at the end of the year, will you, all about it?" She promised gladly, and we separated. During the next vacation I got a letter, and I quote from it:

"They weren't *Hyrcanians* at all," she wrote, "they were just *boys*! They did take my breath away at first, but their mental attitude was so natural and sincere that we came to an understanding at the very outset. But they were so rough-and-tumbly in every way that I couldn't help worrying.

One day I was walking alone up in the hill country, and I found an oozy bank where a brook had its beginning. It crept along for some distance under a band of fresh green grass; then, suddenly declaring itself, it dimpled in the sun as it wound its way among the sedges. Farther down it became impatient of obstacles and narrow limits, and flung itself grumblingly over a rocky precipice. I couldn't go any farther, but down yonder in the valley I saw it flowing—deep, placid and decorous, on its way to join the brimming river.

Here was my lesson spread out in a

parable. I said to my restive soul, "That class of yours is like this brook. Those boys were *Jamies* and *Harrys* in the primary room—dear little fellows, in ruffled shirt waists. They will eventually turn into sedate *Jameses* and *Henrys*. Just now they are *Jims* and *Hanks*—little *Niagaras*, as it were. Yon thrifty farmer makes this waterfall turn his grindstone. Are you bright enough to take a hint?"

I remember that for the first lesson we platted the school yard, and found out what the trees were. We did it at recess time. Nobody was obliged to come, but they all did. Curiosity soon gave place to interest. "Those who came to scoff remained to pray."

O, well, they began to learn a new language—the sign language of the woods—and they liked it. It was a great surprise to them to find that the buds were made in summer for the next season's growth, and that you could always tell an oak from other trees by the leaf scars. Those doubting little Thomases had to pull the leaves off before they were convinced that the scars had anything to do with leaves. I let them work out the law of leaf and branch arrangement, and learn that buds and leaf scars tell the forester a truer story than the leaves do.

How we did enjoy the study of the age of trees! The new twigs, with their leaves on, were an easy proposition. But the little ridgy bands grew more and more obscure on the older wood, and we couldn't be sure for more than three or four years back. The hardest case was a wily old apple tree in a fence corner, which utterly refused to tell her age! After this puzzle, we went to a boggy hollow fringed with willows. There were trees little and big, with their varying ages writ large on lusty stem and branch. It was a happy thought to go. It restored confidence.

From the willows we learned something of the natural preferences of trees. Alders and cottonwoods were as thirsty as the willows. This led us to find out

what trees liked better the upland soil, which grew best in deep loam—which didn't mind a sandy soil or stiff clay.

We learned why oaks cover a hillside, while maples scatter more, by seeing acorns drop and roll down hill, and by finding with them the winged samaras of distant maple trees, all sprouting and taking root.

Here on the soft forest floor we sat and talked of many things. I had always wanted to give a lecture on Natural Selection! This was my opportunity. The dead and dying among the living—the struggle for existence—had ample proofs among leaves, twigs, branches and trees. And I could not have asked for a more interested, discriminating and intelligent audience.

Here endeth direct quotation from that precious letter. It was very long.

And people do not read long articles in summer.

The kinds of timber; the uses of each; the meaning of the rings and knots and grain in wood; the doings in the logging camp, the saw mill and the factory;—such weighty matters filled the winter with delightful lessons; and chapters read from Thoreau, Burroughs and the "Ballads of Robin Hood" came in to brighten the end of many a drab, unpleasant day.

In the spring they watched with delight the unfolding of buds into leaf and blossom and fruit. The miracle of returning spring aroused new feelings. A sense of the majesty and mystery of life touched each one.

To point a moral would be allowable at the end of this tale. But I think it would be presumptuous. Those who have read thus far have found it.

EDUCATIONAL MEETINGS.

THE NEW YORK UNIVERSITY CONVOCA-TION.

The thirty-ninth University convocation is to be held in the Senate chamber at Albany July 1, 2 and 3. Monday evening there are to be short addresses from Chancellor Upson, Vice-Chancellor Doane, Regents Lord and McKelway. The annual address Tuesday evening is to be given by President William Herbert Perry Faunce, of Brown University. At the three main sessions the theme for discussion is, "Present Tendencies in Education"—i. e., tendencies in education in the United States at the beginning of the twentieth century.

Tuesday morning at 9:30 Prof. Elmer Ellsworth Brown, of the University of California, is to give the opening address on "Present Tendencies in Secondary Education." Superintendent William H. Maxwell, of New York city; George H. Locke, editor of the *School Review*, University of Chicago; Superintendent Charles B. Gilbert, of Rochester; Principal Fred Van Dusen, of the Ogdensburg Free Academy; Superintendent A. B. Blodgett, of Syracuse; Principal James Winne, of Poughkeepsie, and others are to discuss this sub-

ject. The opening address on "Present Tendencies in Higher Education" will be given by G. Stanley Hall, Clark University; President Stryker, of Hamilton College; President Rush Rhees, of the University of Rochester; Mr. Harcourt, the Minister of Education for Ontario; President Raymond, of Union University; A. E. Winship, editor of the *Journal of Education*, and others will speak on this question.

Wednesday morning Dean John Butler Johnson, of the College of Mechanics and Engineering, University of Wisconsin, gives the opening address on "Present Tendencies in Technical and Professional Education." He is to be followed by President George B. Stewart, of the Auburn Theological Seminary; Dr. Bayard Holmes, Secretary of the Association of American Medical Colleges; Principal Percy I. Bugbee, of the Oneonta Normal School, and others. Convocation will close with the report on necrology by C. W. Bardeen, editor of the *School Bulletin*.

THE AMERICAN INSTITUTE OF INSTRUCTION.

The American Institute of Instruction will hold its seventy-first annual convention at Saratoga, N. Y., July 5 to

8. The programme will consist of addresses by men prominent in public and professional life, and of papers by acknowledged experts upon topics which are engaging the attention of our foremost educators. Music will be a prominent feature of the various sessions. The order of exercises will be published later and will be mailed to any one applying to the secretary. The president of the institute is William F. Bradbury, of Cambridge, Mass., and the secretary Frank W. Whitney, of Watertown, Mass.

THE NATIONAL EDUCATIONAL ASSOCIATION.

The National Educational Association, organized in 1857 as the National Teachers' Association and reorganized in 1871 under its present name, will hold its fortieth annual convention at Detroit July 8 to 12, 1901. This association is now the largest educational organization in the world. Its membership reaches an annual average of over 10,000 members, of whom 2,500 are permanent active members, embracing leading educators of every state.

The organization of this association includes eighteen departments, as follows: The National Council; Kindergarten; Elementary; Secondary; Higher; Normal; Superintendence; Manual; Art; Music; Business; Child-Study; Physical; Science; School Administration; Library; Deaf, Blind and Feeble-Minded; Indian Education. At the annual convention there are eight general sessions of the entire association and two sessions of each department—except the National Council, which holds six sessions, and the Department of Superintendence, which holds no session at this time, since its annual meeting occurs in February—making in all forty-six separate sessions, each with a carefully prepared programme, besides various committee meetings and round-table gatherings. About 150 papers on educational topics will be presented by as many of the prominent educators of the country, who will be selected by the president of the association and the several department presidents. Each paper in the depart-

ment sessions will be open for discussion by the members present.

The president of the association is Prof. James M. Green, of New Jersey; the secretary is President Irwin Shepard, of Minnesota.

PROGRAM OF GENERAL SESSIONS.

TUESDAY AFTERNOON, JULY 9.

ADDRESSES OF WELCOME—

His Excellency, Hon. A. T. BLISS, Governor of Michigan.

Hon. DELOS FALL, state superintendent of public instruction, Lansing, Mich.

Hon. W. C. MAYBURY, Mayor of Detroit.

President JAMES B. ANGELL, University of Michigan, Ann Arbor, Mich.

Superintendent WALES C. MARTINDALE, city schools, Detroit.

RESPONSES—

Hon. RICHARD HARCOURT, Minister of Education, Toronto, Ont.

Superintendent R. G. BOONE, city schools, Cincinnati, Ohio.

Note—Active members will meet at their respective state headquarters, or at other places to be announced in the general program, at 5:30 p. m. Tuesday, July 9, to select nominees for the general Nominating committee.

WEDNESDAY MORNING, JULY 10.

ELEMENTARY EDUCATION

1. What is a Fad?—F. LOUIS SOLDAN, superintendent of city schools, St. Louis, Mo.

2. Is the Curriculum Overcrowded?—J. H. VAN SICKLE, superintendent of schools, Baltimore, Md.

3. How Early May Hand Work Be Made a Part of School Work?—CHAS. R. RICHARDS, director of Manual Training Department, Teachers College, Columbia University, New York city.

Discussion, by WM. K. FOWLER, state superintendent of public instruction, Lincoln, Neb., and WM. M. DAVIDSON, superintendent of city schools, Topeka, Kans.

Appointment of Committee on Nominations.

THURSDAY MORNING, JULY 11.

ECONOMICS AND EDUCATION.

1. Social Science and the Curriculum—Professor GEO. E. VINCENT, University of Chicago, Ill.

2. Common Essentials in Economics—Professor JOHN HUSTON FINLEY, Princeton University, N. J.

3. Economics in the Public Schools—GEORGE GUNTON, president, Institute of Social Economics, Union Square, New York city.

EVENING ADDRESSES.

President's Address—The Duty of the National Educational Association in Shaping Public Educational Opinion—J. M. GREEN, President of the National Educational Association, Trenton, N. J.

Progress in Education—Bishop JOHN LANCASTER SPAULDING, Peoria, Ill.
 Some of Our Mistakes—Principal GEORGE M. GRANT, Queen's University, Kingston, Ont., Can.
 Our National Flower—EDNA DEAN PROCTOR, South Framingham, Mass.
 The School and the Library—FREDERICK M. CRUNDEN, librarian of the Public Library, St. Louis, Mo.
 The Relation of Music to Life—THOMAS WHITNEY SURETTE, University of the State of New York, New York city.

DEPARTMENTS OF KINDERGARTEN EDUCATION AND CHILD STUDY.

Joint Sessions in Woodward Avenue Baptist Church.

KINDERGARTEN DEPARTMENT.

Miss EVELYN HOLMES, Charleston, S. C.
President
 Miss CAROLINE M. C. HART, Mt. Washington, Md. *Vice-President*
 Miss ANNIE LAWS, Cincinnati, Ohio. *Secretary*

CHILD STUDY DEPARTMENT.

THOMAS P. BAILEY, Jr., Chicago, Ill. *President*
 Miss MARION BROWN, New Orleans, La.
Vice-President
 MANFRED J. HOLMES, Normal, Ill. *Secretary*
 WEDNESDAY AFTERNOON, JULY 10.
General Topic for Both Sessions—Rhythm of Work and Play.

1. President's Address—Work and Play—THOS. P. BAILEY, Jr., president, Department of Child Study; assistant professor of pedagogy, University of Chicago.
2. Work and Play for the Kindergarten Child—Mrs. ALICE H. PUTNAM, superintendent of Chicago Froebel Association, Chicago, Ill.
3. Work and Play for the Child of the Elementary School—Miss CHARLOTTE M. POWE, supervisor of primary grades, city schools, Columbia, S. C.
4. Work and Play in Adolescence—M. V. O'SHEA, professor of the science and art of education, University of Wisconsin.

THURSDAY AFTERNOON, JULY 11.

1. (Subject to be supplied)—Miss EVELYN HOLMES, president, Kindergarten Department, N. E. A.; director, South Carolina Kindergarten Training School, Charleston, S. C.
 2. Paper (to be supplied).
 3. Rhythm in the Kindergarten with Illustrations from Experience—Mrs. ETHEL ROE LINDGREN, director in Chicago Kindergarten Institute, Chicago, Ill.
 4. General discussion of papers at both sessions.
- Note—A Parents' Conference will be held on Friday afternoon, July 12, at which many distinguished teachers will be present and take part in the informal discussions.

SUMMER SCHOOL ANNOUNCEMENTS.

KANSAS.

Kansas state normal, summer session, Emporia, June 6-Aug. 7. Address Pres. A. R. Taylor, Emporia.
 Campbell university, Holton, summer Latin school. Write D. H. Strong, principal.

NEW YORK.

Chautauqua Assembly, Chautauqua, July 3-Aug. 29. Address Chautauqua Assembly, General Offices, Cleveland, O.
 Champlain summer school, (Roman Catholic), Plattsburg, July 3-Aug. 23.
 Catholic summer school of America, Cliff Haven, July 7-Sept. 6. Secretary's office, 542 Fifth Avenue, N. Y.
 Columbia university, New York, July 8-Aug. 16.
 New York university, summer courses, July 8-Aug. 16. Address Marshall S. Brown, University Heights, New York city.
 New York state department of public instruction, summer institute, Chautauqua, July 8-26, P. M. Hull, conductor; Thousand Island Park, July 8-26, C. A. Shaver, conductor.
 Public Industrial Art School, Philadelphia, summer session at Saranac Lake. Address J. Liberty Tadd, 319 N. 32d street, Philadelphia.
 Cornell University, summer school, Ithaca, July 5-Aug. 16.

Biological Laboratory of the Brooklyn Institute of Arts and Sciences, Cold Spring Harbor, Long Island, July 3-Aug. 24. Address F. W. Hooper, 502 Fulton street, Brooklyn, or C. B. Davenport, University of Chicago, Chicago, Ill.

ILLINOIS.

Longwood summer school, Longwood, Chicago, Aug. 5-23. Address 9333 Prospect Ave., Longwood, Chicago.
 Northern Illinois State normal school, De Kalb, June 24-July 26.
 Galesburg. Kindergarten normal school, summer session, June 3-28. Radd A. Robertson, secretary.
 New School of Methods, Chicago, July 17-Aug. 2. Address American Book Company, Chicago.
 Armour Institute of Technology, Chicago, June 2-Aug. 2. Address dean of the Technical College.
 Illinois Medical College, summer school, Chicago. H. H. Brown, M. D., Secretary.
 Northwestern University Women's Medical School, Chicago, July 2. Send for catalog "W."
 National summer school, Chicago, July 8-20. Write Ginn & Co., 378 Wabash Ave., Chicago.
 Standard School of Oratory, 1005 Steinway Hall, Chicago, July 1.

Northern Illinois State normal school, summer session, DeKalb, June 24-July 26.
Illinois State Normal University, Normal, Ill., summer session, June 10-July 19.
Northwestern University, Evanston, July 9-26.

MASSACHUSETTS.

Summer School of Art, Ipswich, July 1-Aug. 3. Address Arthur W. Dow, Ipswich.
Amherst College Library, Summer School of Library Economy, Amherst, July 15-Aug. 16.
W. I. Fletcher, Librarian.

State normal school, Hyannis, July 9. W. A. Baldwin, Principal.

The New England Conservatory of Music, Boston, July 9-26.

American Institute of Normal Methods, summer schools: Conservatory of Music, Boston; President, Edgar O. Silver, 29 E. 19th St., New York.

Harvard University, Summer School of Arts and Sciences, Cambridge, July 5-Aug. 15. J. L. Love, clerk.

Marthas Vineyard summer institute, Cottage City, July 9, terms of four and five weeks. W. A. Mowry, Hyde Park, president.

Dartmouth College summer school, July 5-Aug. 3. T. W. D. Worthen, director.

IOWA.

State University of Iowa, Iowa City, summer session, June 17-July 27. Address dean of summer session, Iowa City.

Drake University, Des Moines, summer Latin school. Write Charles O. Denny.

Ott summer school of oratory, Des Moines. Address E. A. Ott.

OHIO.

Mount Union College, Alliance, June 25-Aug. 9. J. L. Shunk, secretary.

Otterbein University, Westerville, June 18-July 30. T. J. Sanders, president.

Wooster University, summer school, Wooster, June 18-Aug. 9. John Howard Dickason, Nelson Sauvain, principals.

MICHIGAN.

University of Michigan, summer session, Ann Arbor, June 24-Aug. 9. Address E. H. Mensel, Ann Arbor.

Ferris' summer school, Big Rapids, May 20-Aug. 3.

Benton Harbor College, summer session, Benton Harbor, May 27-Aug. 6. Principal, G. J. Edgcombe.

Grand Rapids Kindergarten Association, Grand Rapids, July 5-Aug. 30. Address Clara Wheeler, 23 Fountain street, Grand Rapids.

NORTH CAROLINA.

University of North Carolina, June 17-July 6.
Asheville summer school and conservatory, July 5-Aug. 24. George L. Hackney, secretary.

COLORADO.

Denver Normal and Preparatory School, summer session, Denver, June 10-July 12. Fred Dick, Supt.

University of Denver summer school, June 12-July 23. Address Herbert A. Howe, dean, University Park.

Cripple Creek, Chautauqua, and summer normal, July 8-Aug. 29. George J. Blakeley, Supt., Cripple Creek.

Denver Normal and Preparatory School, Denver, summer term opens June 10. Write Fred Dick, principal.

SOUTH CAROLINA.

Converse College state summer school for teachers, Spartanburg, June 20-July 17. Address State Supt. J. J. McMahan, Columbia, or Pres. B. F. Wilson, Spartanburg.

Benedict College State summer school for negro teachers, Columbia, June 20-July 17. Address State Supt. John J. McMahan, Columbia, or Prof. Ralph Osborn, Columbia.

OTHER STATES.

Fryeburg, Me., school of methods, July 16-29. Address Rev. E. H. Abbott, Fryeburg, Me.
Phillipsburg, N. J., High School, summer extension courses, July 1-Aug. 10. H. Budd Howell, director.

Vanderbilt University, Nashville, Tenn., June 24. Address J. T. McGill, Secretary.
Claremont, N. H., summer institute, July 8-Aug. 2.

University of Minnesota, Minneapolis, June 24-Aug. 2. D. S. Kiehle, conductor.

Dakota University, summer school and institute, Mitchell, S. D., June 19-July 23. Address W. I. Graham, Mitchell, S. D.

Virginia Summer School of Methods, Staunton, Va., July 1-26. E. C. Glass, conductor, Lynchburg, Va.

Valparaiso College and Northern Indiana Normal College, Valparaiso, Ind., June 11-Aug. 8. H. B. Brown, president.

Yale University Summer School of Forestry, Milford, Pa. Address Prof. H. S. Graves, New Haven, Conn.

University of Nebraska, Lincoln, June 14-July 26. Address H. G. Shedd, Lincoln, Neb.
Yellowstone Park, summer school. Address Mrs. J. M. Turner, Burlington, Wis.

Summer School of Science for the Atlantic Provinces of Canada, Lunenburg, N. S. Address J. D. Seaman, Charlottetown, P. E. I.

LIGHTS TO LITERATURE BY GRADES.

RAND, McNALLY & Co.

It is evident that School Readers in use a generation ago have had their day. They were scrappy in character and unpedagogic in plan and arrangement, and few teachers will regret their departure. The reaction against the old-style School Readers first showed itself in the effort to provide supplementary reading matter of a higher educational and literary value than that found in the regular textbooks. The demand to-day, however, is for carefully graded elementary readers that in themselves meet this growing need. In other words, just as we have come to believe that childhood is not solely a preparation for life, but quite as much life itself, so we have come to see clearly that school reading should be not so much a preparation *for* literature as a study *of* literature.

This granted, there still remains, in examining a new series of readers, this important question, how thoroughly and acceptably have the editors done their work? The writer has long been of the opinion that the best school readers cannot be compiled by professors of elocution or literature, but by scholarly, cultivated and sympathetic teachers of children, who have not only a broad knowledge of literature and a deep love for it, but who have also a thorough acquaintance with the needs of the school, and especially a keen insight into child nature and a loving sympathy with it. The publishers of the series of Readers called "Lights to Literature by Grades" evidently recognized this idea in engaging their corps of editors.

The kind of editorial work that has been done upon this series of Readers may be indicated by answering two questions:

First, how nearly does this series approach the ideal series of reading books demanded by the best educational thought of the day; and,

Second, what would be the educational results for a pupil who had studied these books with a skillful teacher.

In answer to the first question, the books, mechanically considered, meet all

reasonable requirements. They are especially strong in providing reading matter of the highest literary quality. The selections seem to be very happily chosen, presenting, as they do, material which has a high educational value and which will prove fresh and attractive to modern, wide-awake children. The editors have done this most important part of their work with rare judgment and fine discrimination. The fact that so many of the selections have a vital relation to other work of the school and to the life of the child gives them additional value.

The answer to the second question involves the test of the books in the classroom. The results there must be most gratifying. The study of these books will beget in the pupil a true and abiding love of good literature, and it will give also a strong incentive to more advanced work in the secondary school and the best possible preparation for it.

The books for grades seven and eight are exceedingly good. Nothing better has been published or is likely to be published. The notes on the lessons are very helpful, and will suggest to every progressive teacher the ideal method of studying the selections. As is well said in the opening note: "*The reading lesson should always be a thought exercise.*"

The Holton Primer, which is the first book of the series, although the last to appear, is almost perfect both in subject matter and in its artistic make-up.

Many will not feel quite satisfied with the name given this series of Readers, although the objection may be regarded as somewhat complimentary. The title, "Lights to Literature," seems to suggest the old idea of preparation for literature, and is somewhat of a misnomer for a series whose basic idea is to provide good literature for schools. These books do not light children to a literary haven, but they rather lead them within the very gates to the great field of literature.

WM. M. LAWRENCE,

Principal of the Ray School, Chicago.

THE SCHOOL AND SOCIETY.

BY JOHN DEWEY, PH.D.,

The University of Chicago Press.

This little book contains four lectures, delivered to an audience of patrons and friends of the University of Chicago Elementary School, founded and conducted under Professor Dewey's direction. The first three set forth in terms, such that he who runs may read, Professor Dewey's conception of the general aim and method of Elementary Education. The last lecture is a brief summary of the outcome of the first three years' work of the Elementary School. The subjects of the first three lectures are: "The School and Social Progress," "The School and the Life of the Child," "Waste in Education." Within the limits assigned this notice there is not room for an analysis, much less a discussion of the argument of these chapters. Only one or two of the more central and distinctive ideas can be mentioned.

One of the most important principles underlying this book is Professor Dewey's conception of the relation between education and instinct. One great line of educational reformers, from Rousseau down, have cried, "Back to the child's instincts." In this Professor Dewey heartily joins. But he insists that this is just the beginning, not the goal, of the educational work. To discover and appeal to certain instincts taken as fixed endowments of the child, is to lay open such education to the charges which its critics have not been slow to make—viz., that it is "pandering," "hedonistic," "backboneless," "chaotic." But Professor Dewey insists that when we have found these "natural instincts" we have just gotten in sight of the real educational problem, which is to get these separate and distinct instincts so woven together into a system of mutually coöperating and checking activities, that no instinct shall be left stark and alone demanding exercise and stimulus solely on its own account. It is just this insistence on the *development* and *systematization* of instinct which constitutes Professor Dewey's contribution at this point and which radically distinguishes the work of his Elementary School from others which it is often,

from a superficial observation, thought to resemble.

The central idea with which the book deals directly is that these instincts and the process of their development are concerned with *Social Activities*. In a word, *life* as such is social activity. Hence if the school is to prepare for life it must be social through and through. This means two things: (1) that the school must be in closest connection with the matrix of the social life about it, a connection that has been broken by the rapid changes in our social and industrial organization on the one hand and by certain abstractions of educational theory on the other; (2) that the school itself must be organized and conducted as a social world. Now the essence of a social world is a system of interacting, coöperating occupations. Such occupations are then the backbone of school work. Such occupations are sewing, cooking, weaving, work in woods, metals, clays, etc. Thus all the materials of school work—mineral, plant, animal, mathematics, language, history, art—which in the ordinary curriculum are disconnected and often meaningless, here get their meaning and value developed as factors in the process of living. A fact of Botany is not a fact of plant life merely, but of human life. Because the whole meaning and value of a plant is found in the role it plays in social life. It is the vitalizing and humanizing of material so often treated as inert, dead stuff that is the characteristic thing in this school on the side of the curriculum. Thus is the problem of "correlation of studies" solved, not by subordinating the group of studies to some one, but by tying them all directly to these activities of the child. Such are one or two points of Professor Dewey's doctrine. There are many, and the number is rapidly increasing, who believe that, young as the work of the school is, it has already indicated pretty clearly the direction which the next great educational movement is to take.

A. W. MOORE.

The University of Chicago.

C. W, BARDEEN CONFESSES PLAGIARARISM.

There is a delightful instance of editorial candor in the June number of the School Bulletin. It is not every one who cheerfully would own up to plagiarism, but we have such a confession frankly made by Editor C. W. Bardeen. Mr. Bardeen is never anything if not interesting. He calls himself a literary pirate and then with a very obvious chuckle proceeds to give proof of the fact.

The editor of New York Education in compounding his personal news apparently has the habit of using too much sugar to suit Mr. Bardeen's sturdy taste. It was his brother journalist's preference for sweets that led the Syracuse editor to be tempted to plagiarize. We print Mr. Bardeen's confession with the "stolen" article. We also supply the deadly parallel column. From a reading of the subject matter we get a fair idea of the editorial amenities of educational journalism in the Empire State:

Upon receipt of the June Bulletin we rushed for our files of New York Education and enjoyed a half hour's still hunt in the editor's hard chair,

SWEET THINGS BY COUNTIES—A PLAGIARISM.

(Imitated from a contemporary which finds it easier to get up this sort of thing than news. The quotations, changed only as to the localities and the names, are all from the first three numbers of this year.)

Albany.—Com'r Bonbon is to be commended for his enterprise in publishing a history and directory of the Albany county schools. It is a valuable manual, and shows that Mr. Bonbon has an unusual interest in the work entrusted to him. Albany county has some good schools and one first-class commissioner.

Allegany.—The annual report of Sup't Treacle indicates a condition of progress that is commendatory.

Broome.—Some recent public exercises of the literary societies of Angel Food reflect great credit upon Dr. Lollipop's work for the young people under his charge, and upon his able corps of assistants.

Cattaraugus.—The faculty of the Lemon Drop high schools are given credit for the progress of that institution which is considered one of the best schools of its class in the State.

Cayuga.—Taffy boasts of some excellent schools and school privileges. Prin. Jujube Paste, of the high school, is a man of ability in his work, and is supported by a strong teaching force.

Delaware.—Com'r Chocolate Cream, who is serving his first term, in the second district, is gaining considerable recognition for the ability and earnestness with which he conducts the affairs of his office.

Dutchess.—In a recent issue of his home paper, Prin. Gum Drop of Vanilla Paste has a well-written article upon the subject of "Pedagogy of the Present and Future." Mr. Gum Drop is a strong factor in the educational work of the county, and an independent thinker along educational lines.

Erie.—The largest enrollment in the Peppermint school has been secured this winter.

COUNTIES.

Fulton.—Com'r Willis E. Leek is to be commended for his enterprise in publishing a history and directory of the Fulton County schools. It is a valuable manual, and shows that Mr. Leek has an unusual interest in the work entrusted to him. Fulton County has some good schools and a first-class commissioner.

Albany.—The annual report of Supt. J. E. Massee indicates a condition of progress that is commendatory.

Albany.—Some recent public exercises of these societies reflect much credit upon Dr. Robinson's work for the young people under his charge, and upon his able corps of associates.

Cayuga.—The faculty of the Weedsport High School are given credit for the progress of that institution, which is considered one of the best schools of its class in the State.

Cattaraugus.—Salamanca boasts of some excellent schools and school privileges. Prin. T. S. Bell of the High School, is a man of ability in his work, and is supported by a strong teaching force.

Cattaraugus.—Com'r S. R. Peavy, who is serving his first term in the second district, is gaining considerable recognition for the ability and earnestness with which he conducts the affairs of his office.

Chautauqua.—In a recent issue of his home paper, Prin. S. P. Moran of Sinclairville, has a well-written article upon the subject of "Pedagogy of the Present and Future." Mr. Moran is a strong factor in the educational work of the county, and an independent thinker along educational lines.

Chautauqua.—The largest enrollment in the Brocton school has been secured this winter.

Prin. Pepsin Gum is at the head of this institution. He is thoroughly imbued with professional spirit, and is a school man of recognized ability.

Essex.—There is a snap and vigor about Prin. Caramel's work at Chocolate that is noticeable.

Franklin.—Regarding Sup't Cough Drop of Cream Puff a well-known school man who is intimate with him and his work says: "He is a thorough-going, progressive school teacher, an indefatigable worker, and a strictly honorable man." Who could ask for a better compliment for a teacher? And especially when it is merited.

Fulton.—The people of Licorice have confidence in their school, and are gratified at its marked progress under the care of Principal Jackson Ball.

Genesee.—Unstinted praise has been bestowed upon Com'r Walnut Crisp for a very successful teachers' institute.

Greene.—Prin. Hoarhound of Raspberry Cream is fertile in ideas concerning educational matters, one of the best of which is his plan of government.

Hamilton.—The work done before the meeting by Sup't Lozenge of Trix was as deeply interesting as it was original, and shows him to be a progressive man in the work.

Herkimer.—Miss Maple Sugar has resigned her position to accept a better one at Burnt Almond. She is spoken of as a teacher of superior talents.

Jefferson.—Marshmallow is fortunate to have a corps of teachers possessing the educational spirit, and a superintendent that has a thorough knowledge of how schools should be managed.

Lewis.—Com'r Spearmint has developed into one of the most efficient and painstaking officials, and the schools are showing the effect of his good work.

Livingston.—Christmas eve, Prin. Peanut Brittle of the Sirup schools led to the altar Miss Candied Violet, until recently assistant principal. Both are teachers of unusual ability. Mrs. Brittle is a woman of rare womanly gifts and beauty.

Madison.—Sup't Coconut Ball of Peach Square has been an educator of force and ability, and his resignation is a matter of regret among school men.

Monroe.—The annual report of Sup't Lime Drop of Date Cream is full of suggestions, and shows that he is in close touch with every educational interest, and comprehends full well the needs of his schools. Sup't Lime Drop is wide awake and untiring in his devotion to his work. (So much easier for Editor Soft Sawder to rattle on this way than to read the report and find out what Mr. Lime Drop really says.)

Montgomery.—The advance of the school under Prin. Fig Paste has been marked, he being one of the strongest school men of the county.

Niagara.—This is the eighth year of Sup't Plowed Field's incumbency, and the press of

Prin. P. E. Marshall is at the head of this institution. He is thoroughly imbued with the professional spirit, and is a school man of recognized ability.

Chautauqua.—There is a snap and vigor about Prin. S. S. Travis' work at Sherman that is noticeable.

Clinton.—Regarding Supt. Frederick H. Davis, of Plattsburgh, a well-known school man who is intimate with him and his work says: "He is a thorough-going, progressive school teacher, and indefatigable worker and a strictly honorable man." Who could ask for a better compliment for a teacher? And especially when it is merited.

Oneida.—The people of Brockport have confidence in their school, and are gratified at its marked progress under the care of Principal Clark.

Schenectady.—Unstinted praise has been bestowed upon Com'r James Wingate for a very successful teachers' institute.

Ulster.—Prin. Scudder of this institution is fertile in ideas concerning educational matters, one of the best of which is his plan of government.

Washington.—The work done before the meeting by Supt. W. W. Howe was as deeply interesting as it was original, and shows him to be a progressive man in the work.

Washington.—Miss D. Esther Hollister has resigned her position in the Cambridge school to accept a better one at New Rochelle. She is spoken of as a teacher of superior talents.

Broome.—Binghamton is fortunate to have a corps of teachers possessing the educational spirit, and a superintendent that has a thorough knowledge of how schools should be taught and managed.

Cattaraugus.—Com'r Geo. E. Waller has developed into one of the most efficient and painstaking officials, and the schools are showing the effect of his good work.

Cattaraugus.—Christmas Eve, Prin. Burdette Phillips, of the Allegany schools, led to the altar Miss Mae Mae Sawin, until recently assistant principal. Both are teachers of unusual ability. Mrs. Phillips is a woman of rare womanly gifts and beauty.

Cayuga.—Supt. Snow has been an educator of force and ability, and his resignation is a matter of regret among school men.

Dutchess.—The annual report of Supt. Edwin S. Harris of Poughkeepsie is full of suggestions and shows that he is in close touch with every educational interest, and comprehends full well the needs of his schools. Supt. Harris is wide awake and untiring in his devotion to his work.

Erie.—The advance of this school under the direction of Prin. Louis E. Boutwell has been marked, he being one of the strong school men of the county.

Erie.—This is the eighth year of Supt. Henry P. Emerson's incumbency, and the press of

Banana Velvet speak very highly of the work he has done, and of his general efficiency.

Ontario.—Nougat people seem well satisfied that they have in Prin. Pop Corn Ball an efficient and able superintendent of schools.

Onondaga.—Frequent mention of the work done in the Satin Chips high school leads us to feel sure that Sup't Tutti Frutti is the right man to build up the educational interests of that town.

Orange.—It is with pleasure that we have looked through a manual of the Fudge schools. Sup't Cinnamon Bud has charge of these schools, and the record of their work is one of which to be proud.

Oswego.—There is an enthusiasm manifested in the Sugared Almond high school that shows that institution to be in capable hands under Prin. Macaroon.

Otsego.—In a somewhat exhaustive report of the conditions and accomplishments of the Rock Candy schools, Sup't Wintergreen shows very clearly he has knowledge of every detail of the school machinery of that city. (Our contemporary fails to note that Sup't Wintergreen had ceased to be in charge of these schools more than six months before.)

Putnam.—Among the most wide-awake school men in the State is Sup't Black Walnut Sponge. He is proving his ability in a marked manner, especially in teaching reading, spelling and English in his schools.

Cetera desunt, only because space fails. To prevent misapprehension we would say that the name of the journal from which we have quoted is not *The All-Day Sucker*. Judicious praise is always welcome, but to smear a whole State over every month with Porto Rico molasses is nauseating and sticky.—*June School Bulletin*.

Buffalo speak very highly of the work he has done, and of his general efficiency.

Erie.—Buffalo people seem well satisfied that they have in Henry P. Emerson an efficient and able superintendent of schools.

Greene.—Frequent mention of the work done in the Catskill high school, from those acquainted with the standing of the school, leads us to feel sure that Supt. T. A. Caswell is the right man to build up the educational interests of that town.

Steuben.—It is with pleasure that we have looked through a manual of the Corning schools. Supt. Leigh R. Hunt has charge of these schools, and the record of their work is one of which to be proud.

St. Lawrence.—There is an enthusiasm manifested in the Canton high school that shows that institution to be in capable hands.

Tompkins.—In a somewhat exhaustive report of the conditions and accomplishments of the Ithaca schools, Supt. H. W. Foster shows very clearly he has knowledge of every detail of the school machinery of that city.

Washington.—Among the most wide-awake school men in the State is Supt. Howe. He is proving his ability in marked manner, especially in teaching reading, spelling and English in his schools.

—*Jan., Feb., Mch. New York Education*.

OUR JUNE CONTEMPORARIES.

The Educational Review has an interesting table of contents for its summer number. The Yale College Curriculum, from 1701 to 1901, is reviewed by John C. Schwab, as this institution is about to celebrate the two hundredth anniversary of the granting of its charter. William F. Magie, of Princeton University, has a paper on "The Examination for the Degree of Ph.D." John Dewey, of the University of Chicago, writes of the "Situation as Regards the Course of Study." Wilber S. Jackson, School of Education, University of Chicago, has a second paper on "Notes on Foreign Schools" and C. E. Seashore, of Iowa State University, has

an exhaustive paper on "Suggestions for Tests on School Children."

Education.—Dr. Richard G. Boone, Superintendent of Schools of Cincinnati, Ohio, will assume the editorship of *Education* with the beginning of its twenty-second year in September. The magazine will be published as heretofore, in Boston, but by a corporation to be known as The Palmer Company, with F. H. Palmer as managing editor.

Education has attained its majority, the June number being the last number of its twenty-first year. The current number contains a half dozen good articles, two of which, "The Importance of English as the Vehicle of Expression,"

by Ethelbert D. Warfield, president of Lafayette College, and "Suggestions Upon the Reaching of English Grammar in the Elementary Schools," by Lincoln Owen, Rice School, Boston, are full of cogent reasoning for a more intelligent and rational way of teaching the mother tongue to our school children. "School Gardens," by Henry Lincoln Clapp, of the Mater George Putnam School, Boston, is concluded in this number. This is a practical application of nature study and we hope will not be viewed with alarm by the watchdogs of the three R's.

Modern Methods and the *American Primary Teacher* are good, continuing various devices for making school work attractive to children and suggestive to teachers. Eli Pickwick, in *Modern Methods*, begins a series of illustrated articles on manual training or sloyd, the principle tool used being the knife. Both magazines include as a supplement a very good half-tone 9x12 of Henry Wadsworth Longfellow. The "Art Studies" are continued and a series of industries articles fairly illustrated have been commenced by Josiah B. Dyer. The initial one being "Quarrying and Stone-Cutting."

Primary Education starts on its June circulation with an editorial on "Do We Know How to Rest?" The editor partially outlines her plans for the coming year. Among the most important of these we notice "Literary Study for Busy People" and "Some Phases of Art in the Primary Schools," by Frank A. Parsons. The initial pages of the series of which are given in this number of *Primary Edu-*

cation. The editor hints at another treat for its subscribers in what she calls "Seat Work." We hope the time is near at hand when these misnomers, such as seat work and busy work, may be entirely dropped.

The School Review, from the University of Chicago press, announces itself as the "Program Number" of the National Educational association. The program of the convention is given in full, with some valuable information concerning it.

The articles presented in this number are: "The Obligations and Limitations of the High School," by Charles F. Thwing, "The Development of Moral Selfhood," by William I. Crane; "College-Entrance Requirements in English," by Fred Newton Scott; "The Science of Meanings," by A. J. Bell; "English in Secondary Schools: A Review," by Allan Abbott.

Among the editorial notes George Herbert Locke gives a foretaste of what the *Review* can promise its readers for the ensuing year, and he urges teachers who are going to the N. E. A. to attend the sessions of the Library Department.

The issues of the *School Review* sustains its high character.

The Ohio Educational Monthly makes the announcement that its next issue will be a "Souvenir Fiftieth Anniversary Number." Arrangements have been made for the publication of a number of special articles by persons who have been prominent in the educational work of the state during the last half century. One of the original board of editors is still living and will contribute something.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A HISTORY OF THE AMERICAN PEOPLE.

Francis Newton Thorpe, Ph. D., has here given an enjoyable work for busy men and women as well as the best compendium of American history for the student that has yet appeared. Professor Thorpe's name is familiar to every student of history as the author of a number of exhaustive, scholarly works, as well as through his work as a lecturer on history. This new book, however, is of much more general interest than any that he has yet written, for it fills a gap in our literature which the late Moses Coit Tyler pointed out—the need for a one volume history of our country which is at once exact in scholarship and readable as literature. (\$1.50. A. C. McClurg & Co., Chicago.)

ACADEMIC ALGEBRA.

This is a worthy addition to the series of mathematical text-books prepared by Dr. Wm. J. Milne, and very widely used in our schools. The treatment of the subject throughout is based upon the most modern presentation of the science. It meets fully the most exacting requirements of the entrance examinations of any college or university in the country. The natural method of mathematical teaching has been followed, the student being led to make the proper inferences, to express these inferences briefly and correctly, and to prove their truth by the method of deductive reasoning. (\$1.25. American Book Co., Chicago and New York.)

CIVIL GOVERNMENT.

"In order that the very object of free government may not be defeated and the people become their own oppressors, they must know how to exercise the rights of citizenship intelligently," and this the authors, Edward Schwinn, M. A., and W. Wesley Stevenson, M. A., undertake to teach in "Civil Government." It is a text-book that will appeal to pupils from the summaries and questions at the close of each chapter; the concise yet complete text; the sketches of historical characters; the supplementary reading supplied in a variety of historical and political articles and a glossary of terms forming the last chapter of the book. (\$1.00. J. B. Lippincott & Co., Philadelphia.)

COMFORT AND EXERCISE.

Mary King has written a unique book which we hope will have a large sale. Our American people need to learn the lessons here taught. The six chapters are: "On Comfort," "Comfort in Daily Life," "Comfort in Educa-

tion," "Comfort in Dress," "Educational Exercise," and "The Ideal Gymnasium."

The mechanical make-up of the book is of the highest order. (\$1.00. Small, Maynard & Co., Boston.)

CONCERNING CHILDREN.

Charlotte Perkins (Stetson) Gilman. The most striking characteristic of "Concerning Children" is its good common sense. There are no statistics and nothing technical; just keen and clever observations of the every day life of the child and mother. (\$1.25. Small, Maynard & Co., Boston.)

DAVID, THE BOY HARPER.

Mrs. Annie E. Smalley has written the story of David's boyhood and youth. In a very interesting way she has followed the life of the boy through his youth and middle age until he becomes a great general, wise king and godly man. (90 cents. Jennings & Pye, Cincinnati and Chicago.)

"EDUCATIONAL NUGGETS."

J. R. Howard has gathered together in "Educational Nuggets" bits of ore from the rich mines of Plato, Aristotle, Herbert Spencer, Harris and Butler. The book contains many fine extracts from the writings of these men, with title, author and publisher of volumes quoted from, in the hope that these briefs will interest readers and make them wish to read the books themselves. To those already familiar with the various works referred to the book comes as a special delight, giving, as it does, the rarest gems of thought from each writer. There is a close connection, too, in the disconnected paragraphs, giving suggestiveness, inspiration and encouragement for the training of right-minded men and women for American citizenship. (45 cents. Fords, Howard & Hulbert, New York.)

ESTHER IN MAINE.

Flora Longfellow Turknott has written a charming story for children. It is the story of the visit and experience of a little girl during a summer vacation at her grandparents' home farm in Maine. (90 cents. Jennings & Pye, Cincinnati and Chicago.)

FIRST STUDIES OF PLANT LIFE.

Cornell University has given much attention to nature study. Dr. Atkinson, professor of botany in that institution, is author of a very readable book called "First Studies of Plant Life." He aims to bring the plant before the

child as a living being, with needs like his own. (60 cents. Ginn & Co., Chicago and Boston.)

IN THE MISTY REALM OF FABLE.

Mythology, that most attractive realm in which children may wander, is here presented by Emma Robinson Kleckner in a most delightful way. Used as supplementary reading in the grades, children would even unconsciously imbibe a foundation knowledge which in high school life would make them recognize as friends the Greek and Latin gods and goddesses. The book gives a foretaste of the pleasures to be found in the myths and legends of old Greece and Rome. (50 cents. A. Flanagan Co., Chicago.)

LEADING FACTS OF ENGLISH HISTORY.

D. H. Montgomery is the author of this edition, most of the materials of which were gathered by him during his residence in England. It is a book that will stimulate thought and quicken the pulse of intellectual life by making the pupil feel the full force of the great truth that it is only by knowing what men have done that we can hope to understand what they are now doing. (\$1.25. Ginn & Co., Chicago and Boston.)

LIFE OF A BEAN.

This little book is written by the students of the Oswego Normal School and edited by Mary E. Laing. It is intended for supplementary reading in the first grade. Such books are very much in demand. (15 cents. D. C. Heath & Co., Boston and Chicago.)

LOLAMI, THE LITTLE CLIFF-DWELLER.

Mrs. Clara Kern Bayliss, author of "In Brook and Bayou," has written this beautiful story of "Lolami." The scene is laid among the cliff-dwellers of Chelly canyon, and the story recounts the experiences of a child imprisoned in one of these stone dwellings for years, who finally escapes.

The author's purpose is to describe in the story the location of the cliff-dwellers, their character and manner of life, and especially their homes hewn out of the solid rock, and protected from their enemies by their inaccessibility from without. She has been for years an interested student of this strange race of little folks, and the story is in all essential particulars true to the facts of their lives as they have been collected by the Smithsonian Institution and other explorers.

The beautiful character of Lolami, his misfortunes, and his courage and skill in overcoming difficulties are told in the charming style that characterizes all of the writings of Mrs. Bayliss. The story is as interesting, and will prove as new to most grown people as it is to the children.

It is printed in large type, well illustrated and substantially bound, for use as a supplementary reading book in the schools. (50 cents. Public School Publishing Co., Bloomington, Ill.)

NATURE'S MIRACLES.

These volumes by Elisha Gray are made up of familiar texts on science. Volume 1 is devoted to world building and life, earth, air and water; volume 2, energy and vibration, sound, heat, light, explosives; volume 3, electricity and magnetism, history, theory, invention and application. The author in his preface to volume 2 says: "This volume deals with the primal elements not only of life, but of material existence itself. Without heat and light we cannot conceive of the physical universe; and sound becomes a modification of these without which animated creation would soon destroy itself, and even while it lived would fail to develop, lacking the means of communication. (3 Vols., each 60 cents. Fords, Howard & Hulbert, New York.)

NEW METHODS IN EDUCATION.

J. Liberty Tadd has exerted a wide influence among teachers generally. This late book, "New Methods in Education," will be received gladly by his friends and admirers. (\$2.00. Orange, Judd & Co., New York.)

ONE THOUSAND CLASSICAL CHARACTERS.

Ivory Franklin Frisbee, Ph. D., has prepared in this book a concise account of every name of any importance connected with classical history. The study of the classics is today far more comprehensive in its scope, far broader in its purpose, than it ever was before. The classical teacher feels that he must in studying any side of his subject avail himself of every possible aid that can be drawn from the investigations of his fellow-specialists, in order to give interest and life to his instruction. (75 cents. Hinds & Noble, New York.)

ORAL LESSON BOOK IN HYGIENE.

This book, by Henrietta A. Merick, is intended for the use of teachers in primary grades. While it is one of the New Century Series of Physiologies, it can be used to advantage with any book or series which may be in the school. It shows by its suggested oral lessons for the first three years of school life that as much knowledge of the body and the laws of its health as primary pupils are able to comprehend can be made interesting as well as of educational and practical value. (\$1.00. American Book Co., New York and Chicago.)

PUPPET CROWN.

Harold MacGrath's "The Puppet Crown" is a romance pure and simple, written to enter-

tain. Its force is such that it challenges comparison with the work of writers whose names have become immortal. It is as winning and sweet as if Sir Walter Scott had written it. (\$1.50. Bowen-Merrill Co., Indianapolis, Ind.)

PRACTICAL STUDIES IN GRAMMAR.

In Samuel W. Norton's "Practical Studies in Grammar" theory and practice are combined; principles and definitions given from the outset, but with little formality; abundance of easy examples for illustrations are given, as well as varied selections from standard literature for grammatical and literary study. (40 cents. A. Flanagan Co., Chicago.)

PRACTICAL CIVICS.

In writing this book for use in advanced grammar grades and high school classes, Superintendent George Chandler has done a good work. Clearness and conciseness of statement, simplicity of diction and comprehensiveness of presentation are salient features. The historical development of our government and institutions, and the treatment of the powers, functions and limitations of our government as outlined in the constitution, are handled by a practical teacher skilled in the art of presenting such subjects to students. As usually treated the subject of Civics contains a vast deal of statement in a form beyond the mental reach of the pupils in the grades in which the work is taught. (60 cents. A. Flanagan Co., Chicago.)

PIECES FOR EVERY OCCASION.

Caroline B. Le Row has seen to it that the selections included in this volume are in harmony with the spirit of classroom work, which demand brevity, simplicity, good sense and sound morality. This is the only compilation of the kind in which these matters are considered as of equal importance with elocutionary effect. Very few of the pieces have been published before. (\$1.25. Hinds & Noble, New York.)

PHYSICAL CULTURE.

B. F. Johnson's "Physical Culture" is a book of simple, practical directions for school and home. No costly apparatus, or elaborately furnished gymnasium is necessary to carry out the ideas presented. There are talks to parents, to children, and to teachers; chapters on breathing, the use of the hands, fingers, wrists, lower limbs, and joints; talks on how to be straight, on food, drink, cleanliness, care of the hair, eyes, ears, teeth and feet. Cleanliness and purity of habits and character also come in for a word in this logical little treatise. (35 cents. B. F. Johnson Pub. Co., Richmond, Va.)

SCHOOL ARITHMETIC, PRIMARY.

"To steer carefully between the Scylla of modern fad and the Charibdis of mechanical

drudgery and stupefying monotony," John M. Colaw, A. M., and J. K. Ellwood, A. M., the authors, say, has been their aim in writing the primary "School Arithmetic." "To teach the child—not arithmetic" is the task of the teacher, and the writers have outlined a practical work suggesting methods of obtaining the best results. They have taken into consideration the conditions under which most teachers are required to work and so have followed the natural order closely. (35 cents. B. F. Johnson Publishing Co., Richmond, Va.)

STORIES OF INDIAN CHIEFTAINS.

Mary Hall Husted in this little volume shows the conflict between the Indian and white man, both in war and peace, during the pioneer struggles in America. It begins with the discovery by Columbus, and closes with a picture of the Indian life of today. (50 cents. Public School Publishing Co., Bloomington, Ill.)

SCHOOL ARITHMETIC, ADVANCED.

John M. Colaw, A. M., and J. K. Ellwood, A. M., have written this book to serve the three-fold purpose of a grammar school arithmetic, a high school arithmetic and an elementary algebra. The aim has been throughout to give the student practical ideas and actual business practice, together with the proper development of his reasoning faculties. There is a special chapter devoted to banking. Two sets of problems are given; the second set to be used in review work. (60 cents. B. F. Johnson Publishing Co., Richmond, Va.)

STORIES AND TALES FROM THE ANIMAL WORLD.

Emma M. C. Greenleaf says in the preface of her book: "Most children like stories about animals. What the child likes the mother likes, the teacher likes. If happily the teacher, the mother and the child like these stories, new and old, all is well." (40 cents. Educational Publishing Company, Chicago and Boston.)

STUDIES OF ANIMAL LIFE.

This manual, by Herbert E. Walter, Worrallo Whitney, and F. Colby Lucas, consisting of a series of laboratory exercises for the use of high schools, is the result of seven years' experience in high school work.

The studies begin with one-celled animals and continue through the development to man. "A Teachers' Book of Suggestions," accompanies the manual, in which hints on the pedagogical value of each study and suggestions for the preparation and treatment of the material are given, "A Table of Classification of the Animal Kingdom" completes the manual. (50 cents. D. C. Heath & Co., Boston.)

TYPICAL FOREST TREES IN PHOTOGRAVURE.

These trees are in three series on 24 cards, size 9x12 inches. Each plate gives a view of

the tree; an enlarged view of the trunk, in which the characteristics of the bark are distinctly shown and an enlarged protograph of the leaf. As these protographs are made from actual photographs taken directly from nature they must be accurate. They are beautifully and artistically printed on a fine grade of paper and will satisfy the most fastidious. A few concise notes are printed on each card, giving the habits, economic value and other facts of interest. These illustrations will be found of great value in the classroom and in the study of the botanist. (Each series 40 cents; complete \$1.00. A. W. Munford, Chicago.)

THE TRANSFIGURATION OF MISS PHILURA.

Florence Morse Kingsley in *Miss Philura* raises the question, "Is it a satire or not?" The Brooklyn Eagle says yes: "A very clever story . . . a satire on some of the new scientists who believe in the 'all-encircling Good,' and that all one has to do is ask, and, if he believes he shall receive those things which he seeks. . . . The story is very bright and captivating."

Helen Wilmans says no: "The story of *Miss Philura* is the most perfect thing in its line I ever got hold of. It is the first real hit I have seen as a story founded on the new idea. It illustrates the great truths I have been teaching so long. It shows how easy it is to make these truths come into our everyday lives and do for us just the things we want done." (60 cents. Funk & Wagnalls, New York.)

THINKING AND LEARNING TO THINK.

J. B. Schaeffer, Ph. D., LL. D., gives in his "Thinking and Learning to Think" many valuable suggestions, some of which are: To think; to learn to think right, and to help others to learn to think; to give encouragement to the conscientious teacher, rather than to criticise adversely until he is heartsick and weary; to present a few of the pedagogical problems in a clear way, and to uphold present school systems unless a better can be suggested. As "Man is a thinking being, whether he will or no, all he can do is to turn his thoughts the best way." The book is valuable as a means to the end sought. (\$1.25. J. B. Lippincott Co., Philadelphia.)

THE NEW ERA.

E. O. Butterfield has devoted thirty pages of his song book, "The New Era," to the "New Idea" notation, the last 125 pages being given to music suitable for day schools, singing schools, convocations and the home. The author has evidently borne in mind that the best in music is none too good for the American boys and girls, so has striven to cultivate a taste for good music, as well as to give songs that are pleasing and bright. The result is a

happy selection of music, neither too easy nor too difficult, but of a grade that a pupil can and will master. (75 cents. C. W. Bardeen, Syracuse, N. Y.)

THE NEW HIGHER ARITHMETIC.

A. W. Rich has in this book made an attempt to supply the long felt need of a good, practical and suggestive higher text in arithmetic. Not a book of catch problems, or a book filled with curious or obsolete matter is here presented; but a helpful, inspiring, useful text book. A feature has been added known as "Indicated Work," by which the pupil is taught to formulate his problems and to express them in clear and definite language. (75 cents. A. Flanagan Co., Chicago.)

THE PERRY PICTURES.

The Perry Pictures hardly need any words of commendation. They have made it possible for even the poorest child to have reproductions of the most famous paintings of the world. (1 cent each. Perry Pictures Co., Malden, Mass.)

THE AENEID OF VIRGIL—BOOK I.

Archibald A. Maclardy, B. A., has written a book by which any one can learn not only about the Latin language, but the language itself. This text will afford an opportunity for occasionally undergoing that best of discipline, translation at sight. It further enables a student to obtain a bird's-eye view, so to speak, of the scansion of whole verses and whole paragraphs, thereafter to appreciate the melody and artistic beauty of the rhythm, and finally to commit passages to memory not only with ease, but with enjoyment. (\$1.50. Hinds & Noble, New York.)

THE CHILD: A STUDY IN THE EVOLUTION OF MAN.

Alex. F. Chamberlain has written this volume, which is neither a treatise on embryology nor an essay on anatomy or physiological psychology, but is intended as a study of the child in the light of the literature of evolution, an attempt to record and, if possible, interpret some of the most interesting and important phenomena of human beginnings in the individual and in the race. (\$1.50. Chas. Scribner's Sons, New York.)

THE SECOND SCHOOL YEAR.

Henrietta M. Lilley in the "Second School Year" has outlined, according to consecutive months, the work done by second year children in the California (Pa.) State Normal School. This little book will be a very valuable aid to teachers in planning their work for the school year. It encourages originality, suggesting outlines for methods of teaching, and shows the correlation of subjects in the school curriculum. (\$1.00. C. W. Bardeen, Syracuse, N. Y.)

WAYS OF WOOD FOLK.

Some of these sketches by William J. Long originally appeared in the *Youth's Companion*, but are here dedicated to Plato, the Owl, who looks over the author's shoulder as he writes and who knows all about the woods. This little book should be in the library of every school. It contains fifteen charming stories of animal life, the first of which, "Fox Ways," is the most interesting. (50 cents. Ginn & Co., Chicago.)

WIGWAM STORIES.

Mary Catherine Judd's name is very familiar to us as the author of "Classic Myths," which is having an extensive sale. These stories, told by and about the Indians, have been gathered from various sources. They show, among other interesting facts, that the love of the beautiful, and also of the humorous, dwells in the heart of the wild Indian. (75 cents. Ginn & Co., Chicago and Boston.)

WILDERNESS WAYS.

This little book, written by Wm. J. Long, gives many interesting sketches which are the result of many years of observation in the meadows and fields. He treats the animals purely as such; not giving them human motives and imaginations, as so many writers do. (45 cents. Ginn & Co., Chicago.)

WHAT IS A KINDERGARTEN?

The author, George Hansen, in this work propounds the question, "What is a Kindergarten?" and then proceeds to vigorously discuss the importance of nature in its equipment and development. The fact that the author is by profession a landscape artist enables him to offer many valuable suggestions in the placing of shrubs, plants and trees. (75 cents. D. P. Elder & Morgan Shepard, San Francisco.)

Educational Articles in the June Magazines.

"Working One's Way Through College," Alice Katherine Fallows	<i>Century</i>
"The Story of the States—Colorado," Earl Mayo	<i>Pearson's Magazine</i>
"The Scottish University," John Grier Hibbon	<i>Scribner's Magazine</i>
"Words and Their History," R. W. McAlpine	<i>St. Nicholas</i>
"Population and the Isthmian Canal," Prof. Lewis M. Haupt	<i>Lippincott's</i>
"The Opportunity of the Small College," Herbert W. Horwill	<i>Atlantic Monthly</i>
"The Profit of College Education," Presidents Hadley, Jordan, Sherman and Thwing	<i>Success</i>
"Religion of the College Student," Prof. Francis G. Peabody	<i>Forum</i>
"The Latest Triumphs of Electrical Invention," Prof. Jos. S. Ames	<i>Review of Reviews</i>
"The Ideal School House," Wm. H. Burnham	<i>World's Work</i>
"American Historians of To-day," Alfred Mathews	<i>The Criterion</i>
"A Plea for Pure Science," Prof. Henry A. Rowland	<i>Popular Science Monthly</i>
"A Girl's College Life," Lavinia Hart	<i>Cosmopolitan</i>
"Poetry of the Chinese," Dr. W. A. P. Martin	<i>North American Review</i>
"Trade Routes and Civilization," Jacques W. Redway	<i>Gunton's Magazine</i>
"Alleged Luxury Among College Students," Arthur T. Hadley	<i>The World's Work</i>
"English Language—Its Debt to King Alfred," Brander Mathew	<i>Harper's</i>
"Study of Children," Arthur McDonald	<i>Everybody's Magazine</i>
"Magnificent Home of Learning," Victor Henderson	<i>World's Work</i>

THE UNIVERSITY LAW SCHOOL

OF ILLINOIS.

ROSWELL SHINN, LL.D., Dean.

52 DEARBORN STREET,
CHICAGO

Offers **unusual facilities** for the study of the science of the law at a **minimum cost** and equips students for the successful practice of the profession.

It has an **unexcelled faculty** of eminent practitioners **especially skilled** in the field of their chosen subjects, who seek not to obtain personal gain but to impart desired knowledge.

It is always open for the admission of students, and has preparatory and post-graduate courses.

Correspondence solicited.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled. The word marked according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—*E. E. McIntire, Superintendent of Schools.*

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN & TEACHERS' AGENCY.
The South and West offer better advantages to aspiring teachers than any other section. **THE SOUTHWESTERN TEACHERS**

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to
CLAUD J. BELL, Proprietor.



FOREIGN
COPYRIGHTS

PATENTS
AND
TRADE-MARKS.

A COPYRIGHT

WILL PROTECT
YOU FROM PIRATES.

Let us copyright and protect your Books, Music and Pictures. It will **PAY** you. Many copyrights are worthless. You can not afford to take such chances. WE GUARANTEE A VALID COPYRIGHT AT SMALL COST. Information, opinions, and legal advice. Patents and Trade-Marks secured. Send description and receive advice FREE

COLUMBIA COPYRIGHT COMPANY,
WARDEN BUILDING, WASHINGTON, D. C.

We are headquarters for the Perry penny pictures. Send your orders to us. We will send Free 25 of these pictures to any one sending us one new subscription with \$1.00 for the "Review of Education."

NOT PROMISES=ACTUAL DIVIDENDS

EASTERN CONSOLIDATED OIL COMPANY STOCK

will be on sale a short time longer only at

25 CENTS PER SHARE

NOW earning dividends at the rate of 2 per cent monthly, 6 per cent quarterly, 24 per cent annually on the investment.

We have an acreage of 19,806½ acres of the best proven oil land in California. Our Kern River property is in the famous Section 29. The officers and directors are:

DEPOSITORY:

NORTH AMERICAN TRUST Co., New York City.

OFFICERS:

President, HON. DANIEL N. MORGAN, Former Treasurer of the United States.

Vice-President, HON. ERNEST CADY, Former Lieut.-Governor of Connecticut.

Treasurer, EDWARD K. MORGAN.

Secretary, GEORGE W. BENNETT.

DIRECTORS:

HON. DANIEL N. MORGAN, New York City.

HON. ERNEST CADY, Hartford, Conn.

HON. MILES B. PRESTON, (Ex-Mayor of Hartford, Conn.)

HON. CHAS. J. NOYES, (Ex-Speaker Mass. House of Representatives.)

L. A. CORBIN, (of White, Corbin & Co., Rockville, Conn.)

California Manager, H. D. LOMBARD, Los Angeles, Cal.

Field Superintendent, JOHN ROMMELL, Los Angeles, Cal.

With such a property and such a management it is the best investment on the market today and must constantly increase in value. Send for prospectus and order blanks to

L. E. PIKE & CO., Fiscal Agents,
1236 Stock Exchange Bldg., - **Chicago, Ill.**

Gilt Edge Copper Stock For Sale.

AN INVESTMENT.

**BETTER THAN UNITED STATES BONDS.
BETTER THAN RAILROAD BONDS OR STOCKS.
BETTER THAN A LIFE INSURANCE POLICY.**

WHY?

Because this investment will pay larger dividends.
Because the continued increasing quantity of large ore bodies will double the par value of the stock each year.
Because this increase and multiplication of values will increase for generations to come.

A limited number of shares of paid-up, non-assessable stock in an Illinois corporation, having its home office in Chicago and controlled by Chicago people, are offered for sale at 50 per cent of their face value. These copper mines cover an area of land equal to a mile square, embracing the apex and sides of a mountain over 2,000 feet in height.

Development work to the extent of nearly 7,000 feet in tunnels, shafts, drifts and winzes, all in copper ore, have been driven, exposing several million dollars of ore. This is located in a climate favorable for mining operations the year round, with railroad communication direct to the mines. The title of this property is perfect and the company is entirely out of debt. The proceeds of the stock offered for sale are to be devoted to two purposes — namely:

First — To complete two tunnels. No. 1, to pierce the body of ore at a depth of about 1,100 feet; and No. 2, to pierce the body of ore at a depth of about 1,800 feet. These two tunnels can be completed within eight months from date; and as all work is now in ore, this development is likely to develop the largest body of copper ore on the continent.

Second — To place in operation a reduction plant of one hundred (100) tons per day. This can be in full operation within six months. The product of this mill, together with the high-grade ore, shipped direct to the smelter, will produce exceedingly large dividends, bringing the stock to par within the coming year.

An analysis of the low-grade ore just made is as follows:

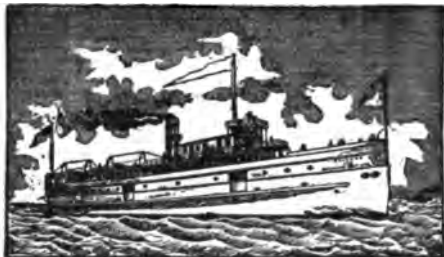
Copper, 10.33 per cent; gold, \$5 per ton; silver, \$2.70 per ton; nickel, \$6 per ton; cobalt, \$3 per ton, making the value of this low-grade ore upward of \$47 per ton. There are millions of tons of this grade ore in sight. When we consider the average value of the celebrated Calumet and Hecla copper mine ore is but $3\frac{1}{2}$ per cent, or \$10.50 per ton, and that company having declared over \$73,000,000 in dividends, thus showing its ore to contain less value than the above analysis shows of gold, silver and nickel, and as the Calumet and Hecla twenty-five dollar shares are now selling at \$855 per share, the possibilities of the advancement in the value of the stock offered by me are great. Adjoining our copper mines, our neighbors have taken out upward of Twenty Million Dollars (\$20,000,000), and have developed the vein on our end lines to a depth of 1,700 feet. Our surface ore croppings on the mountain tops are 2,300 feet above the surface workings of our neighbors — thus we have over 4,000 feet in depth of valuable ore deposits. Our neighbors are producing over one and a half millions per year and have only one eighth of the area that we own.

Investigation as to the above statement being true is solicited from any desirous of making a permanent investment.

ROBERT LINN,

**Manufacturer of Mining Machinery and Fiscal Agent,
1025 New York Life Bldg., Chicago.**

INDIANA TRANSPORTATION CO.
Michigan City & Chicago Line.
 NEW STEAMER



MARY
 Make two trips daily to
Michigan City & Alaska Beach

Leaves dock, State St. Bridge 9.30 a. m. and 8.00 p. m. daily. Returning arrives at Chicago 9.00 a. m. and 6.30 p. m.

Daily Excursions from Chicago.

---ROUND TRIP 75 CENTS---

A beautiful boat, a cool breeze and back in time for supper.

E. S. Craw, Gen. Pass. Agt.

Tel. Cent. 2162. No. 1 State St.
 Chicago, Ill.

Chicago College of Law
 AND
Kent College of Law.

Law Department of Lake Forest University.

Athenaeum Building, 26 Van Buren St.,
 CHICAGO, ILL.

Hon. Thomas A. Moran, LL. D., Dean.

Both Day and Evening courses with complete curriculum in each.

Day Sessions are held during the morning and afternoon hours.

Its course of instruction is believed to be as broad and thorough as that of the best law colleges in the country.

Evening Sessions are held each week day evening, with ten hours' sessions each week. This course affords young men who are engaged in law offices and elsewhere during the day an opportunity to pursue a regular course of law studies under proper instruction.


Prepares for admission to the Bar in all the States.

Degree of Bachelor of Laws conferred upon those who complete the Three Years Course to the satisfaction of the Faculty.

For information, address the Secretary,

ELMER E. BARRETT, LL. B.,

1503 - 100 Washington St.



WEBSTER'S INTERNATIONAL DICTIONARY

NEW EDITION JUST ISSUED
 NEW PLATES THROUGHOUT

Now Added **25,000 NEW WORDS**, Phrases, Etc.

Rich Bindings • 2364 Pages • 5000 Illustrations

Prepared under the supervision of W. T. Harris, Ph.D., LL.D., United States Commissioner of Education, assisted by a large corps of competent specialists.

BETTER THAN EVER FOR GENERAL USE

Also Webster's Collegiate Dictionary with Scottish Glossary, etc.
 "First class in quality, second class in size."

Specimen pages, etc., of both books sent on application.

G. & C. MERRIAM CO., Publishers, Springfield, Mass., U. S. A.

GET
THE
BEST

FIVE NEW BOOKS

FOREST TREES.

BY JULIA E. ROGERS, Cornell University. Ready about Dec. 1st.

12mo. About 350 pages. Price, \$2. Advance orders, \$1.

This book will be illustrated with the pictures from our Typical Forest Trees in Photogravure and will be the most beautiful and practical book on trees ever published. It will also contain 200 drawings and other illustrations.

Miss Rogers was science teacher in the high schools of Des Moines and Cedar Rapids, Iowa, and as an institute lecturer in Nature Study attained a prominent place among the educators of the state. In 1900 she was one of Prof. Bailey's assistants in the Cornell Summer School of Nature Study, and the two years following were spent in postgraduate study in Cornell University.

A NEW BOOK ON BIRDS.

BY EDWARD B. CLARK.

16 Colored Plates. Ready Nov. 1st.

We have had so many calls for an elementary bird book to be illustrated with our color plates reduced in size that we have decided to publish one.

Price, \$1. Orders received in advance of publication, 75 cents.

A Boy's Trip to Yellowstone Park.

BY OLIN D. WHEELER.

100 Illustrations.

Ready Oct. 1st.

This is a charming story, adapted for supplementary reading in schools. No one is more capable than Mr. Wheeler to write a delightful story about this most interesting region. Geography teachers will welcome it.

Price, 75 cents. Orders received in advance of publication, 50 cents.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, fruiture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity with terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 8½x8½ in. 75 cents.

FAMILIAR BIRDS.

An interesting Book on Familiar Birds, by JOSEPH GRINNELL, President of the Cooper Ornithological Club, of California.

Illustrated with 16 color pictures. Price \$1.00. Advance orders, 75 cents.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

To THE **DAN AMERICAN**
EXPOSITION
AND
NIAGARA
FALLS.



THE WABASH
Has its own rails
and is the short-
est line to
BUFFALO
AND THE
FALLS.

Stop-overs given
at both points on
all tickets.

For Descriptive Matter, Rates, etc., call on nearest
Ticket Agent, or address
C. S. CRANE, Gen'l Pass'r and Ticket Agent, ST. LOUIS,
or F. A. PALMER, Asst Gen'l Pass'r Agent, CHICAGO.

AMERICA'S MOST POPULAR RAILWAY

CHICAGO
AND
ALTON

PERFECT PASSENGER SERVICE

BETWEEN

CHICAGO - KANSAS CITY,
CHICAGO - ST. LOUIS,
CHICAGO - PEORIA,
ST. LOUIS - KANSAS CITY.

THROUGH PULLMAN SERVICE
BETWEEN CHICAGO AND

HOT SPRINGS, Ark. DENVER, Colo.
TEXAS, FLORIDA, UTAH,
CALIFORNIA - OREGON.

IF YOU ARE CONTEMPLATING A TRIP, ANY POR-
TION OF WHICH CAN BE MADE OVER THE CHICAGO
& ALTON, IT WILL PAY YOU TO WRITE TO THE UNDER-
SIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

Coaching in Yellowstone Park.

The largest private coaching or wagon transportation outfit in the world is in **Yellowstone Park**—eight hundred horses and three hundred coaches and surreys. The hotels of the Park, situated at the most important points, are large and commodious. Three years ago when the Christian Endeavorers met in San Francisco, ten thousand of them returned via Portland, Oregon and the **Northern Pacific Railway**, and for three weeks the **Yellowstone Park Transportation Company** moved these delighted tourists at the rate of **500 per day**, from **Cinnabar** the terminus of the N. P. R. Park branch at the Northern boundary of the Park and two hours' ride from the main line at Livingston. Next July a **\$59.00** round trip rate will be made from Chicago to San Francisco for the **Epworth League** meeting, including return via Portland, Oregon and the Northern Pacific to Yellowstone Park and the twin cities of St. Paul and Minneapolis. Tickets via this route will also enable you to see Tacoma, Seattle, Spokane, Helena and Butte.

Send 6 cents to Chas. S. Fee, St. Paul, Minn., for an **Epworth League** map folder and **Wonderland, 1901**.

CHICAGO, Milwaukee & St. Paul RAILWAY.

ELECTRIC LIGHTED TRAINS BETWEEN

Chicago,
Des Moines,
Sioux City,
Omaha,
Chicago,
Milwaukee,
St. Paul,
Minneapolis,

EVERY DAY IN THE WEEK.

All Coupon Ticket Agents sell tickets via
Chicago, Milwaukee & St. Paul Ry.

F. A. MILLER, General Passenger Agent,
CHICAGO, ILL.

TEACHERS

attending the National Educational Association Meeting at Detroit will find it to their advantage before deciding definitely on their summer vacation to consult the

Canadian Pacific Railway.

Side trip tickets will be sold in Detroit to nearly all points in Canada at a SINGLE FARE for the round trip, from July 13th to 22d, inclusive, good to return until Sept. 1st. Special low rates will also be in effect to Buffalo and to lake and river resorts, such as Niagara Falls, Georgian Bay, Lake Ontario, Alexandria Bay, Thousand Islands of the St. Lawrence, and other famous watering resorts.

For further information apply to

A. C. SHAW,
*General Agent, Passenger Department,
228 South Clark Street,
Chicago.*

MIDLAND UNIVERSITY

CHICAGO AND DIXON, ILL.

LAW The freshman year's study in the Chicago Law School gives a complete preparation for business life, and prepares for advanced standing, or second year, leading to degrees of LL.B., and LL.M. and prepares for admission to the Bar in all the States.

MEDICINE The major subjects are studied during the first year, so that the student can take advanced standing in any medical college leading to degree of M. D.

DENTISTRY The first year's work prepares the student for the laboratory in technical and operative work; the second year leading to degree of D.D.S.

PHARMACY The general subjects of Pharmacy are Chemistry, Botany, Microscopy and others; prepares the student for the second year and the State Board of Examination leading to degree of Ph. C.

FULL BUSINESS COURSE Including Bookkeeping, Business Correspondence, Business Arithmetic, Business Forms, Business Penmanship, Actual Business and Office Work, Shorthand and Typewriting Course; the Elective system of Shorthand is taught, simplest, most easy of acquirement and the most rapid system extant.

NORMAL COURSE Leading to degree of B. Pd., and fitting for examination for Second Grade, First Grade and five-year State Certificate.

CLASSICAL COURSE Leading to the degree of A. B., and bringing the student into possession of a breadth of culture that is indispensable in a literary and professional life.

A COURSE IN SCIENCES The complete course comprehends Physics, Botany, Zoology, Geology, Astronomy, Physiology, Anatomy, Mineralogy, Algebra, Geometry, Higher Mathematics, Latin and German; leading to B. S. degree, to examination for a teacher's five-year or life certificate.

∴ UNIVERSITY EXTENSION ∴

HOME STUDY COURSES in "Correct English" conducted by Josephine Turck Baker, Editor of the Magazine. "Correct English;" Law, Literature and History, Latin, Greek, Hebrew, French, German, Elementary Sciences, Philosophy, Ethics, Aesthetics, and Logic, Political Science, Political Economy, Sociology. *Students may enter the regular University Courses at any time and receive credit for work in any of the above courses.* Extension courses lead to B. S., Ph. B., Lit. B., Ph. D. Laboratory work, comparative study, class-quizzes and lectures, under supervision of specialists, for advanced students. Special opportunities are offered at the Summer Seminars; courses are organized for this special work which continue from six to sixty days. Field Secretaries for the University are authorized under the corporate seal and signature of the Chancellor.

Board and room in private family \$2.50 to \$3.00 per week. Club rate for 50 to 100, \$1.25 to \$1.50 for table board. For information for the courses, address

J. J. TOBIAS, Chancellor, 115 Dearborn St., Chicago.

:::ANNOUNCEMENT:::



THE FACTS AND FICTION LITERARY BUREAU

was organized in 1896 as an agency to secure for our increasing lists of book buyers, a special discount on periodicals and books. This service soon extended into giving special attention to the Manuscripts sent in by our members, and from that has grown our "Writers' School for Literary Criticism and Revision," including a syndicate department for the marketing of manuscripts. The Writers' School affords its members the following advantages and benefits:

1. Editorial criticism on original literary work by a select faculty of literary experts.
2. Advice concerning the salability of manuscripts.
3. Experienced counsel on the special literary line for which the member appears to be the best fitted.
4. Expert judgment on the evidence of literary talent.
5. Directions as to improvement.
6. Revisions and corrections of manuscript at minimum cost by experienced and successful litterateurs.
7. Marketing of meritorious manuscript at low commission.
8. Publishing manuscript at special agreement.
9. Permanent engagement when continuous work is available.
10. Full paid year's subscription to **FACTS AND FICTION**, with attending privileges, as noted in the "Special Application Blank."
11. All the advantages of the book-buying department.

Write for Prospectus.



Full Membership	-	-	\$5.00.
Limited Membership	-	-	1.00.

Both memberships include privileges of Book Buyers' Department and one full paid year's subscription to **FACTS AND FICTION**.

ADDRESS:

Facts and Fiction Literary Bureau,
CAXTON BUILDING, - CHICAGO.

THE TEACHER'S TOOL-CHEST

☛ No mechanic could get employment as a skilled workman unless he possessed a well-stocked **Tool-Chest**. Let this catalogue be kept at hand for reference when you find that you need tools in your trade.

☛ Those starred (*) are published in The Standard Teachers Library, and may also be had in manilla at 50 cts. each. Those marked with two stars (**) are in cloth, but may also be had in paper at 15 cts. Those marked with a dagger (†) have been chosen by the State Superintendent for the New York State School Library. Those preceded by (T) are specified for use in New York training classes.

Subscribers to **Birds and Nature or Review of Education** may order books except **Well's Writing Books**.....

from this list at 33 1/3 % discount and they will be sent prepaid.

Send all orders to ,

A. W. MUMFORD, 203 Michigan Ave., Chicago, Ill.

Books of Reference

(T) **Sonnenschein's Cyclopaedia of Education**, \$3.75.
Knott's Ready Reference Law Manual, \$2.00.
Bardeen's Verbal Pitfalls, 75 cts.
Lawrence's Classified Reading, \$2.00.

The History of Education

† **Williams's History of Modern Education**, \$1.50.
 *† **Quick's Educational Reformers**, \$1.00.
Bardeen's Dictionary of Educational Biography, \$2.00.
 — **Note Book of the History of Education**, 50 cts.
 † **Mark's History of Educational Theories in England**, \$1.25.
Bremner's Education of Women in Great Britain, \$1.50.
Bennett's History of Pedagogics, 50 cts.
Browning's Short History of Education, 50 cts.
Hallmann's Sketches from History of Education, 20 cts.
Uniform Questions in History of Education, 25 cts.
 † **Donaldson's History of Education**, \$1.00.
Lane's Elementary Greek Education, 50 cts.
 † **Cadet's Port Royal Education**, \$1.50.
Milne's Teachers Institutes, Past and Present, 25 cts.
Grant's Burgh Schools of Scotland, \$3.00.
Stevens's High School of Edinburgh, \$2.00.
Barbera's Educational Publications in Italy, 25 cts.
Bardeen's Educational Journalism in New York, 40 cts.
 — **Educational Journalism—an Inventory**, 25 cts.
Smith's Schools of Syracuse, N. Y., \$3.00.

Descriptions of School Systems

† **Zimmerman's Methods of Education in the United States**, \$1.00.
Page's Graded Schools in the United States, \$1.00.
Bramwell's Training of Teachers in the United States, \$1.25.
Burstall's Education of Girls in the United States, \$1.25.
 *† **Bardeen's Roderick Hume, the New York Teacher**, \$1.25.
 — *† **Commissioner Hume, a story of N. Y. Schools**, \$1.25.
 *† **Riddle's Nicholas Comenius, ye Pa. Schoolmaster**, \$1.50.
 *† **Grasby's Teaching in Three Continents**, \$1.50.
State Education for the People, \$1.25.
Bennett's National Education in Europe, 15 cts.
Arnold's Reports on English Schools, \$2.00.
A Day of my Life at Eton, \$1.00.
 † **Parsons's Prussian Schools**, \$1.00.
 — † **French Schools**, \$1.00.

Biographies of Noted Educators

Bardeen's Dictionary of Educational Biography, \$2.00.
 *† (T) **Quick's Educational Reformers**, \$1.00.
Hallmann's Luther, Bacon, Pestalozzi, Pére Girard, Diesterweg, and Froebel, 20 cts.
 *† **Carlisle's Memoirs of Ascham and Arnold**, \$1.00.
Meiklejohn's Life of Dr. Andrew Bell, \$1.00.

* **George Birkbeck, Pioneer of Popular Education**, \$1.50.
 † **Harris's Horace Mann**, 50 cts.
Monroe's Henry Barnard, 50 cts.
Portrait of Edward A. Sheldon, for framing, \$1.00.

John Amos Comenius

Portrait of Comenius, for framing, \$1.00.
 *† **Laurie's Life and Works of Comenius**, \$1.00.
The Orbis Pictus of John Amos Comenius, \$3.00.
Butler's Place of Comenius in Education, 15 cts.
Maxwell's Text-Books of Comenius, 25 cts.
Quick's John Amos Comenius, 15 cts.

Life and Works of Pestalozzi

Portrait of Pestalozzi, for framing, 25 cts.
 *† **DeGuimps's Pestalozzi: his Aim and Work**, \$1.50.
 † **Pestalozzi's How Gertrude Teaches her Children**, \$1.50.
 — *† **Letters on Early Education**, \$1.00.
 † **Rooper's Object Lessons, or Words and Things**, 50 cts.
Hoose's Pestalozzian Arithmetics, Parts I, II, \$1.00.

Froebel and the Kindergarten

Portrait of Froebel, for framing, 25 cts.
 † **Autobiography of Friedrich Froebel**, \$1.50.
Letters of Friedrich Froebel, \$1.50.
Hanschmann's The Kindergarten System, \$2.00.
 † **Shirreff's Kindergarten System**, \$1.00.
 † **Essays on the Kindergarten**, \$1.00.
 † **Marenholz-Buelow's Child and Child-Nature**, \$1.50.
 † **Perez's First Three Years of Childhood**, \$1.50.
 † **Hallmann's Primary Helps**, 75 cts.
 — **The New Education, Vol. VI**, \$2.00.
Meiklejohn's The New Education, 15 cts.
Kriege's The Child and Child Nature, \$1.00.

School Law

* **Bardeen's Manual of Common School Law**, \$1.00.
Johnson's School Law for Training Classes, 50 cts.
Uniform Questions in School Law, Answered, 25 cts.
Code of Public Instruction, New York, \$2.50.
Marble's Powers and Duties of School Officers, 15 cts.
State Education for the People, \$1.25.
Harris's General Government and Education, 15 cts.
Canfield's Rural Poor and Higher Education, 15 cts.
Northrop's High Schools, 25 cts.
Emerson's Latin in High Schools, 25 cts.
Bardeen's Effect of College-Preparatory High School upon Attendance and Scholarship in Lower Grades, 15 cts.
 — **Continuous Contracts for Teachers**, 50 cts.
 — **Taxpayer and the Township System**, 25 cts.
 — **Problems of City School Management**, 25 cts.
Denominational Schools, Discussion of 1889, 25 cts.
Cooper's Compulsory Laws and Enforcement, 15 cts.
Miller's Education as a Department of Government, 15 cts.
The Bible in the Public Schools, \$1.00.
 † **Karoly's Dilemmas of Labor and Education**, \$1.00.



The Teacher and His Qualifications

Ballard's Arrows, or Teaching a Fine Art, 75 cts.
Bardeen's Teacher as he Should Be, 25 cts.
 — **Teacher's Commercial Value**, 25 cts.
 — **Teaching as a Business for Men**, 25 cts.
 — *† **Teaching as a Business, Four Addresses**, \$1.00.
 — **Continuous Contracts for Teachers**, 50 cts.
 — *† **Roderick Hume, the Story of a N. Y. Teacher**, \$1.25.
 — *† **Commissioner Hume, a Story of N. Y. Schools**, \$1.25.
 *† **Riddle's Nicholas Comenius, ye Pa. Schoolmaster**, \$1.50.
Sheely's Anecdotes and Humors of School Life, \$1.50.
Ellis's Tales Told out of School, \$1.00.
Hooper's Fifty Years in the Schoolroom, \$1.00.
 *† **Northend's The Teacher and the Parent**, \$1.00.
Blodgett's Relation of a Principal to the Community, 25 cts.
 *† **The Teacher's Mentor**, \$1.00.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

- *† The Teacher's Critic, \$1.
- *† The Teacher's Guide to Correct Speech, \$1.00.
- * Helps to Self Culture, \$1.00.
- *† Huntington's Unconscious Tuition, 30 cts.
- Hinsdale's Pedagogical Chairs in Universities, 15 cts.
- * Gowdy's Ideals and Programmes, 75 cts.
- Gray's Methods and Courses in Normal Schools, 15 cts.
- * Thomas's Dictionary of University Degrees, \$1.00.
- Smith's Honorary Degrees in Colleges, 15 cts.
- * Kay's Education and Educators, \$2.00.
- Sabin's "Organization" vs. Originality, 15 cts.

The Science of Education

- *† (T) Herbert Spencer's Education, \$1.00.
- *† Herbart's Lectures and Letters on Education, \$1.75.
- *† Rein's Outlines of Pedagogics, \$1.25.
-  The standard text-book of the Herbartian system.
- *† Rooper's "A Pot of Green Feathers", 50 cts.
-  A popular presentation of Herbartian principles.
- Spinoza's Amendment of the Intellect, \$1.00.
- * Patrick's Elements of Pedagogics, \$1.00.
- Williams's Outlines of Psychology, 75 cts.
- (T) Payne's Science and Art of Education, \$1.00.
- *† Tate's Philosophy of Education, \$1.50.
- Uniform Questions in Philosophy of Education, Answered, 25 cts.
- Hinsdale's Schools and Studies, \$1.50.
- Harris's Theory of Education, 15 cts.
- Milton's Small Tractate of Education, 15 cts.
- Harris's Pedagogical Investigation, 15 cts.
- Marenholz-Buelow's School Workshop, 15 cts.
- Gaines's Principles in Teaching, 20 cts.
- Maudsley's Sex in Mind and Education, 15 cts.
- *† Huntington's Unconscious Tuition, 30 cts.
- Education as Viewed by Thinkers, 15 cts.
- Beesau's Spirit of Education, \$1.25.
- Mill's Inaugural Address at St. Andrews, 25 cts.
- Craig's Philosophy of Training, \$2.00.
- Minutes of the International Congress, 1884, \$5.00.
- *† Kay's Education and Educators, \$2.00.

Child Study

- McMillan's Early Childhood, \$1.25.
- *† Grossmann's Manual of Child Study, 50 cts.
- *† Perez's First Three Years of Childhood, \$1.50.
- Tiedemann's Record of Infant Life, 15 cts.

School Management

- *† (T) Landon's School Management, \$1.50.
- * Buckham's Handbook for Young Teachers, 75 cts.
- *† Gowdy's Ideals and Programmes, 75 cts.
- *† Page's Theory and Practice of Teaching, \$1.00.
- *† DeGraff's School Room Guide, \$1.50.
- DeGraff's Primer of School Management, 25 cts.
- Batsdorf's Management of Country Schools, 20 cts.
- Gill's Method and School Management, \$1.00.
- Housel's Method of Graded Examinations, 50 cts.
- Wells's Graded Schools, \$1.00.
- Uniform Questions on School Management, Answered, 25 cts.
- Maxwell's Examinations as Tests for Promotion, 15 cts.
- Richardson's Learning and Health, 15 cts.
- Maudsley's Sex in Education, 15 cts.
- Sabin's "Organization vs. Individuality", 15 cts.
- Kotelmann's School Hygiene, \$1.50.

The Art of Teaching

- Fitch's Lectures on Teaching, \$1.25.
- *† Fitch's Art of Questioning, 15 cts.
- *† Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- *† Fitch's Art of Securing Attention, 15 cts.
- * Hughes's How to Secure and Retain Attention, 50 cts.

- Hughes's Mistakes in Teaching, 60 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Southwick's Quiz Book on Theory and Practice, \$1.00.
- Dime Question Book on Theory and Practice, 10 cts.

School Discipline

- Wickersham's Discipline as a Factor, 50 cts.
- Kennedy's Philosophy of School Discipline, 15 cts.
- Aids to School Discipline, per box, \$1.25.
- Penniman's Suggestions in School Government, 15 cts.
- Briggs's Boys as they are Made, 25 cts.
- Lyttleton's Mothers and Sons, the Problem of Home Training, \$1.50.
- Sedgwick's Talks with my Pupils, \$1.00.

Courses of Study

- Emerson's Latin in High Schools, 25 cts.
- Kennedy's Must Greek Go? 50 cts.
- Lees's The Claims of Greek, 25 cts.
- Comfort's Modern Languages in Education, 50 cts.
- Pattee's Literature in the Public Schools, 20 cts.
- Hardeen's Effect of College-Preparatory School, 15 cts.
- McCosh's Essays on Higher Education, 75 cts.
- Northrop's High Schools, 25 cts.
- Canfield's Rural Poor and Higher Education, 15 cts.
- *† Harris's Art Education, the true Industrial Education, 50 cts.
- Perrot's Art Teaching in High Schools, 50 cts.
- Gray's Courses of Study in Normal Schools, 15 cts.
- Hinsdale's Pedagogical Chairs in Colleges, 15 cts.
- Harris's University and School Extension, 15 cts.
- Meiklejohn's The New Education, 25 cts.
- Straight's Aspects of Industrial Education, 15 cts.
- Briggs's Industrial Training in Reformatory Institutions, 25 cts.
- Marenholz-Buelow's School Work-Shop, 15 cts.
- The Bible in the Public Schools, \$1.00.
- Hinsdale's Schools and Studies, \$1.50.
- Beck's Graded Question Book, \$1.00.

Methods of Teaching

- Hoose's Province of Methods in Teaching, \$1.00.
- *† Fitch's Lectures on Teaching, \$1.25.
- *† DeGraff's School Room Guide, \$1.50.
- *† Page's Theory and Practice of Teaching, \$1.00.
- Lilley's Second Year in School, \$1.00.
- Gowdy's Ideals and Programmes, 75 cts.
- Eclectic Manual of Methods, \$1.00.
- Van Wie's Methods in Common Branches, 75 cts.
- Development Helps, 50 cts.
- Dickinson's Limits of Oral Teaching, 15 cts.
- Barnard's Oral Training, 75 cts.
- *† Hughes's Mistakes in Teaching, 50 cts.
- *† How to Secure and Retain Attention, 50 cts.
- *† Fitch's Art of Securing Attention, 15 cts.
- *† Art of Questioning, 15 cts.
- Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- Fitch's Lectures on Teaching, \$1.25.
- Kiddle's How to Teach, a Manual of Methods, \$1.00.
- Lind's Methods of Teaching in Country Schools, \$1.00.
- Hart's In the School Room, \$1.00.
- Bates's Methods of Teachers Institutes, 75 cts.
- Fowle's Teachers Institute, \$1.00.
- Uniform Exam. Questions on Methods, Answered, 25 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Bryant's Teaching of Morality in the Schools, \$1.00.

Natural Science

- Wilson's How to Study Nature in Elementary Schools, 50 cts.
- Gager's Current Errors in Science Teaching, 50 cts.
- *† Harris's How to Teach Natural Science, 50 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

† Rooper's Object Lessons, or Words and Things, 50 cts.
 Brownell's Inductive Manual of Laboratory Physics, 50 cts.
 Hegner's Young Scientist, 75 cts.
 McKay's 100 Home-Made Experiments, 15 cts.
 Stowell's Syllabus of Physiology, \$1.00.
 Schreiber's Exercise for Health and Cure, 50 cts.
 Richardson's Learning and Health, 15 cts.
 Kotelmann's School Hygiene, \$1.50.
 Maudsley's Sex in Education, 15 cts.
 Bardeen's Question Book of Stimulants, Answered, 10 cts.
 Uniform Examination Questions in Physics, Key, 25 cts.
 Uniform Examination Questions in Physiology, Key, 25 cts.
 Dime Question Books (a) Physics, (b) Chemistry, (c) Geology, (d) Botany, (e) Zoology, (f) Physiology, (g) Narcotics and Stimulants, (h) Astronomy. Each 10 cts.
 Underwood's Systematic Plant Record, 30 cts.
 Hennig's Anatomical Manikin, \$1.00.
 Goulding's Flores: A Botanical Game, 50 cts.
 Palmer's Physiology Cards, 50 cts.
 Roosevelt's Manual of Needlework, 60 cts.

Singing

Butterfield's The New Era, 75 cts.
 The Song Budget, 15 cts.
 The Song Century, 15 cts.
 The Song Patriot, 15 cts.
 The Song Budget Music Series Combined, cloth, 50 cts.
 The Song Gymnast, 50 cts.
 Songs of the Lyceum League, 20 cts.
 Songs from the Arbor Day Manual, 25 cts.
 The School Room Chorus, 35 cts.
 Tillinghast's Diadem of School Songs, 50 cts.
 Russell's He! a Hundred Songs, 35 cts.
 Phillips's Song Life, 50 cts.

Physical Culture

Kotelmann's School Hygiene, \$1.50.
 Preece's Physical Culture, 230 illustrations, \$2.00.
 Schreiber's Exercise for Health and Cure, 50 cts.
 DeGraff's Manual of Callisthenics, 25 cts.
 Reinhardt's Bodily Development, 25 cts.
 Richardson's Learning and Health, 15 cts.
 Maudsley's Sex in Mind and Education, 15 cts.
 Burnham's Outposts and Guard Duty, U. S. A., 50 cts.
 Hennig's Anatomical Manikin, \$1.00.

Reading

† Farnham's Sentence Method of Teaching, 50 cts.
 Southwick's Dime Question Book of Reading, 10 cts.
 Randall-Diehl's Practical Delsarte Primer, 50 cts.
 Hamilton Déclamation Quarterly, Vol. 1, \$1.00.
 Swett's Manual of Elocution, \$1.50.
 * Teacher's Guide to Correct Speech, \$1.00.
 † Bardeen's Verbal Pitfalls, 75 cts.
 Hall's Orthoëpy made Easy, 75 cts.
 † DeGraff's Practical Phonics, 75 cts.
 — Pocket Pronunciation Book, 15 cts.
 Hoose's Studies in Articulation, 50 cts.
 Pooler's Hints on Teaching Orthoëpy, 10 cts.
 Dime Question Book of Orthography, 10 cts.
 Sanford's Limited Speller, 25 cts.
 Bales's Diacritical Speller, 50 cts.
 Uniform Questions in Spelling, 25 cts.
 Blakeley's Parliamentary Rules, 25 cts.
 Gore's Parliamentary Practice, 50 cts.

Books for Supplementary Reading

Wells's King Kindness and the Witch, 50 cts.
 Martin's Stories of New York, 50 cts.
 Prentice's History of New York State, \$1.50.
 Binner's Old Stories Retold, 59 illustrations, 25 cts.

Bardeen's Little Old Man, 50 cts.
 Hegner's Young Scientist, 75 cts.
 Irving's Rip Van Winkle, illustrated, 10 cts.
 Burt's Bees, a Study from Virgil, 15 cts.
 * † Bardeen's Authors' Birthdays, Three Series, each, \$1.00.

Public Day Exercises

* † Ballard's Pieces to Speak, \$1.00.
 Boyden's Primary Speaker, \$1.00.
 Skinner's Arbor Day Manual, \$2.50; music pages, 25 cts.
 Yawger's How to Celebrate Arbor Day, 10 cts.
 Hinckley's Longfellow Memorial Exercise, 10 cts.
 Preece's Physical Culture, illustrated edition, \$2.00.
 Northend's Memory Selections, 3 series, each 25 cts.
 Hoss's Memory Gems, 15 cts.
 Thoughts from Earnest Women, 25 cts.
 Education as Viewed by Thinkers, Quotations, 15 cts.
 Egbert's Last Words of Famous Men, \$1.00.
 Hendrick's "The Table is Set", a comedy, 15 cts.
 Browne's "Glimpse of Grammarland", a farce, 15 cts.
 The Song Gymnast, 50 cts.

English

† Bardeen's Outlines of Sentence-Making, 60 cts.
 Edwards's Graded Exercises in English, Nos. 1-VI, per dozen, \$1.00.
 Morey's Outline Work in Elementary Language, 50 cts.
 Weaver's Pictures in Language Work, 50 cts.
 Emerson's Composition and Criticism, 50 cts.
 The Bulletin Composition Book, 15 cts.
 Wilson's Elementary English, 35 cts.
 Dime Question Book of Letter-Writing, 10 cts.
 A Primer of Letter-Writing, 25 cts.
 Williams's Topical Lexicon of Synonyms, \$1.25.

English Grammar

Reid's English Grammar Simplified, 50 cts.
 Bugbee's Exercises in English Syntax, 35 cts. Key, 35 cts.
 Roat's Grammar Outlines for Regents' Schools, 50 cts.
 † Evans's Manual of Grammar, 75 cts.
 Wilson's Grammar made Practical, 75 cts.
 Jewell's Grammatical Diagrams, 75 cts.
 Sornberger's Normal Language Lessons, 50 cts.
 Kiddle's 3,000 Grammar Questions, with Answers, \$1.00.
 Dime Question Books, (a) Grammar, (b) Rhetoric, 10 cts.
 Uniform Questions in Grammar, Answered, 25 cts.

Literature

Primer of American Literature, 75 cts.
 * † Bardeen's Authors' Birthdays, 3 Series, each, \$1.00.
 Daniels's Outline of English Literature, 50 cts.
 Hendrick's Questions in Literature, 35 cts.
 Thurber's English Routine in Schools, 15 cts.
 Harlow's Early English Literature, 75 cts.
 Southwick's Dime Question Book of (a) English, (b) American Literature. Each 10 cts.
 Pattee's Literature in the Public Schools, 20 cts.
 Lowrie's How to obtain Value from a Book, 25 cts.
 Meese's Facts in Literature, 15 cts.
 The Regents' Selections in Literature, 25 cts.
 The same, with 22 pages of Music, 35 cts.
 Northend's Memory Selections. Three series, each 25 cts.
 Thoughts from Earnest Women, 25 cts.
 Hoss's Primer of Memory Gems, 15 cts.
 Game of Fireside Authors, 52 cards, portraits, 35 cts.
 Young Folks' Favorite Authors, 52 cards, 35 cts.

German

Meissner's Easy Method of Learning German, \$1.25.
 Wheatley's German Declensions Made Easy, 15 cts.
 German Self-Taught, 40 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

John's Child's German Book, 40 cts.
 Interlinear German Reading-Book, for Self-Tuition, 75 c.
 Franck's German Letter-writer, 40 cts.
 Thimm's Conversation in 4 Languages, 60 cts.
 — Literature of Germany, 40 cts.
 Lessing's German Fables, with English Notes, 40 cts.
 Goethe's Egmont, with English Notes, 40 cts.
 Schiller's Jungfrau von Orleans, with English Notes, 40 cts.
 — Marie Stuart, with English Notes, 40 cts.
 — Der Neffe als Onkel, with English Notes, 40 cts.
 Regents Selections in German Literature, 10 cts.
 Comfort's Modern Languages in Ed'n, 50 cts.

French

Pick's Memory and Means of Improving it, \$1.00.
 — Method applied to Acquiring French, \$1.00.
 Regents Selections in French Literature, 10 cts.
 Thimm's Conversation in 4 Languages, 60 cts.

Italian

Marchetti's Italian Reader, with English Notes, 75 cts.
 — Idiomatic Phrases and Dialogues, 75 cts.
 Italian and English Commercial Correspondence, 50 cts.
 Italian Self-Taught, 40 cts.
 Thimm's Conversation in 4 Languages, 60 cts.

Spanish

Salvo's Idiomatic Phrases and Dialogues, 75 cts.
 Spanish and English Commercial Correspondence, 50 cts.
 Spanish Self-Taught, 40 cts.
 Regents Selections in Spanish Literature, 10 cts.

Other Modern Languages

Grammars, with Exercises, Reading Lessons, etc. (a) Icelandic, (b) Danish and Norwegian, (c) Modern Greek. Each \$1.25. Those starred have Keys at 25 cts.
 Conversation Books, (a) Swedish, (b) Danish and Norwegian, (c) Russian, Each, 75 cts.
 Self-Taught Series. (a) Norwegian, 40 cts.; (b) Turkish, \$1.25; (c) Arabic, \$1.25.
 Tarring's Elementary Turkish Grammar, \$2.00.
 Macalpine's Gaelic Dictionary, \$3.00.
 Stewart's Gaelic Grammar, \$1.00.

Ancient Languages

Smith's Vocabulary of Caesar, Book II., 50 cts.
 Five Chapters of Caesar, for Regents Schools, 10 cts.
 Emerson's Latin in High Schools, 25 cts.
 Kennedy's Must Greek Go? 50 cts.
 Lees's Claims of Greek, 25 cts.
 Sayce's Comparative Assyrian Grammar, \$3.00.

Geography

Wilkins's Descriptive Geography, taught by means of Map-Drawing: (a) United States, 75 cts.; (b) Continents, 75 cts.; (c) Teachers Manual, for both, \$1.50.
 † Bardeen's Geography of the Empire State, 75 cts.
 Farnham's Oswego System of Teaching Geography, 50 cts.
 Griffin's Topical Geography, with Methods, 50 cts.
 * Edwards's Topical Questions in Geography, \$1.00.
 Pardon's Oral Instruction in Geography, 15 cts.
 Redway's School Geography of Pennsylvania, 35 cts.
 Northam's Conversational Lessons, 25 cts.
 The Regents Questions in Geography, 25 cts. Key 25 cts.
 Uniform Questions in Geography, Answered, 25 cts.
 Prentice's Review Questions in Geography, 15 cts.
 Dime Question Book of Geography, Answers, 10 cts.
 Cheney's Globe Manual, for Schools, 25 cts.
 Collins's International Date Line, 15 cts.
 Bassett's Latitude, Longitude, and Time, 25 cts.
 Edwards's Geographical Cards, Box of 200, \$1.00.
 — Geographical Game, "Our Country", 50 cts.
 — Outline Topic Cards, per dozen, 15 cts.

Griffith's Outline Blackboard Maps, per set, \$3.00.
 Bürgli's Relief Maps, Palestine, \$10.00; Switzerland (a) 11x17½, \$3.50; (b) 23x34, \$10.00.

Civics

Bardeen's Civics, New York Edition, 75 cts.
 Edwards's 500 Questions in Civics, in box, with Key, 50 cts.; ** the same in book form, 30 cts.
 Dime Question Book of Civil Government, 10 cts.
 Uniform Questions in Civil Government, Key, 25 cts.
 † Northam's Civil Government (a) New York, (b) Missouri, (c) New Jersey, each, 75 cts.
 * Nichols's Government Class-Book, Michigan, \$1.00.
 Ball's Instruction in Citizenship, 40 cts.
 Shea's Nature of the American Government, 75 cts.
 Alden's Political Economy, 75 cts.
 Houghton's Conspectus of Political Parties to 1880, \$2.00.
 * Bardeen's Manual of School Law, \$1.00.
 Knott's Ready Reference Law Manual, \$2.00.

History

* Mace's Working Manual of American History, \$1.00.
 Gowen's Note Book of Early American History, 75 cts.
 * Williams's Topics and References, \$1.00.
 Godard's Outlines of U. S. History, 50 cts.
 1,000 Questions in American History, with Answers \$1.
 Northam's Fixing the Facts of U. S. History, 75 cts.
 ** Van Wie's Outlines and Questions, 30 cts.
 Julland's Brief Views of U. S. History, 35 cts.
 Dime Question Books of (a) General, (b) United States History. Each 10 cts.
 Uniform Questions in U. S. History, Key 25 cts.
 Uniform Questions in Current Topics, Answered, 25 cts.
 Edwards's Historical Cards (a) U. S., (b) General History. Each \$1.00. (c) Historical Game, 50 cts.
 Clarke's Chart of U. S. History, per dozen, 50 cts.
 † Hendrick's History of the Empire State, 75 cts.
 Review Questions on Hendrick's History, 5 cts.
 Prentice's History of New York State, \$1.50.
 Martin's Stories of New York, 50 cts.
 Trainer's How to Teach U. S. History, \$1.00.
 Jennings's Chronological Tables of Ancient History, \$1.00.
 Mills's Tree of Mythology, \$3.00.

Arithmetic

Benton's Happy Method in Number, 75 cts.
 † Beebe's First Steps among Figures, \$1.00.
 — The only practical exposition of the Grubé Method.
 Hoose's Pestalozzian Arithmetics, 1st, 2d year, each, 50 cts.
 Welch's Problems for Junior Classes, 50 cts.
 Wood's Short Cuts in Arithmetic, 75 cts.
 Bradford's 30 Problems in Percentage, 25 cts.
 Bassett's Latitude, Longitude, and Time, 25 cts.
 Granger's Metric Tables and Problems, 25 cts.
 Hutton's Manual of Mensuration, 50 cts.
 The Regents Questions in Arithmetic, 25 cts.; Key 25 cts.
 Uniform Questions in Arithmetic, Answered, 25 cts.
 Dime Question Book of Arithmetic, Answers, 10 cts.
 Prentice's Problems in Arithmetic, 20 cts.; Key, 25 cts.
 Edwards's Everyday Business Problems, with Key, 50 cts.
 Sanford's Word Method in Number, 50 cts.
 Davis's Manual for Teaching Fractions, 25 cts.
 Davis's Fractional Apparatus, \$4.00.
 Cube Root Blocks, Three Places, \$1.00.
 Bristol's Honesty Cards in Arithmetic, 50 cts.
 The Bulletin Number Fan, \$1.00.

Higher Mathematics

Dime Question Book of Book-Keeping, Key, 10 cts.
 Uniform Questions in Book-Keeping, Key, 25 cts.
 Book-Keeping Blank, Books, Journal, Day Book, etc., each, 15 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

Wells's Manual of the Movement Method, 25 cts.
 Burritt's Penmanship in Public Schools, 60 cts.
 † Harris's Art Education, 50 cts.
 Perrot's Art Teaching in High Schools, 50 cts.
 Ball's 1000 Questions and Answers in Drawing, 40 cts.
 Regents Paper ruled for Book-Keeping, 500 sheets, \$2.00.
 Michael's Algebra for Beginners, 75 cts.
 Uniform Examination Questions in Algebra, Key, 25 cts.
 Pitcher's Outlines of Surveying and Navigation, 50 cts.
 Smith's Geometry Test Papers, per 100, \$1.00.

Penmanship and Drawing

Wells's Natural Movement Method, Nos. 1 and 2, per doz
 84 cts.; Nos. 3-6, 96 cts.

Hotchkiss's Practical Lessons in Object Drawing, 50 cts.
 * Uniform Questions in Drawing, 1892-6, 1896-8, each, \$1.00.
 Weaver's Pictures in Language Work, 50 cts.

Industrial Education

Twining's Technical Education, \$3.00.
 Harris's Educational Value of Manual Training, 15 cts.
 — † Art Education, the true Industrial Education, 50 cts.
 Straight's Aspects of Industrial Education, 15 cts.
 Marenholz-Buelow's School Workshop, 15 cts.
 Melklejohn's The New Education, 15 cts.
 Roosevelt's Manual of Needlework, 60 cts.
 † Karoly's Dilemmas of Labor and Education, \$1.00.
 Meath's Physical, Industrial, and Technical Training, \$2.00.
 Briggs' Industrial Training in Reformatory Institutions,
 25 cts.
 — Boys as they are Made, 25 cts.
 Geddes's Industrial Exhibitions, 25 cts.

Teachers Question Books

The Regents' Questions to 1892: (a) Arithmetic, (b) Key;
 (c) Geography, (d) Key; (e) Grammar, (f) Key; (g)
 Spelling. Each 25 cts. The seven in one volume, \$2.00.
 The same, in all subjects but without answers, 1892-3, 1893-4,
 1894-5, 1895-6, 1896-7, 1897-8, 1898-9, 1899-1900, each, \$1.
 * The N. Y. State Examination Questions to 1894, \$1.00. The
 same, 1895, 1896, 1897, 1898, 1899, each 10 cts. * Together
 \$1.00.
 The New York Question Book, to March, 1890, \$2; in paper \$1.
 The same, Supplement No. 1, to June, 1891, 25 cts.
 The same, Supplement No. 2, to June, 1892, 25 cts.

Supplements 1 and 2, in one volume, cloth, \$1.00.

* The same, Supplements Nos. 3, 1892-3; 4, 1893-4; 5, 1894-5;
 6, 1895-6; 7, 1896-7; 8, 1897-8; 9, 1898-9; 10, 1899-1900,
 each, \$1.00.

The Uniform Questions since June, 1892, in (a) Algebra,
 (b) American History; (c) Arithmetic; (d) Art of Ques-
 tioning and History of Education; (e) Book-Keeping;
 (f) Civil Government; (g) Geography; (h) Grammar;
 (i) Methods and School Economy; (k) Physics; (l)
 Physiology; (m) School Law. Each, 25 cts.

* The Buffalo Examination Questions, 1892-6, 1896-8; each, \$1.
 Southwick's Dime Question Books, each 10 cts.

Elementary Series

* In one book, Cloth, \$1.
 3. Physiology.
 4. Theory and Practice.
 6. U. S. History and Civil Gov't.
 10. Algebra.
 13. American Literature.
 14. Grammar.
 15. Orthography and Etymology.
 18. Arithmetic.
 19. Physical and Political Geog.
 20. Reading and Punctuation.

Advanced Series

* In one book, Cloth, \$1.
 1. Physics.
 2. General Literature.
 5. General History,
 7. Astronomy.
 8. Mythology.
 9. Rhetoric.
 11. Botany.
 12. Zoology.
 16. Chemistry.
 17. Geology.

Extra volumes, by C. W. Bardeen, 21. Temperance Physi-
 ology, 22. Book-Keeping, 23. Letter-Writing.

* The Civil Service Question Book, \$1.50.

* Sherrill's Normal Question Book, \$1.50.

Southwick's Quizzism, 25 cts.

— Quiz Book on Teaching, with Answers, \$1.00.
 Kiddie's 3000 Questions in Grammar, with Answers, \$1.
 Beck's Graded Question Book, \$1.00
 Housel's Method of Graded Examinations, 75 cts.
 Craig's Common School Question Book, \$1.50.
 Stillwell's Practical Question Book, \$1.50.
 Swett's Questions for Written Examinations, \$1.00.

School Supplies

The Hornstone Slating, per gallon, \$8.00.
 The Agalite Blackboard Slating, per gallon, \$6.00.
 McCully's Perforated Erasers, per dozen, \$1.00.
 The Bulletin Ink-Well Filler, \$1.25.
 Hennig's Anatomical Manikin, \$1.00.

Any of these books except Wells' copy books will be sent
 prepaid at 33⅓ per cent discount to subscribers to THE REVIEW OF
 EDUCATION or BIRDS AND NATURE if not in arrears.

Send all orders to

A. W. MUMFORD, Publisher,

203 Michigan Ave.,

CHICAGO.

OCT 6 1913

THE REVIEW OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)VOL. VII. No. 2.
WHOLE NUMBER 64.

CHICAGO, SEPTEMBER, 1901.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment.....	41
Social Science and the Curriculum George E. Vincent.....	45
Our National Floral Emblem Edna Dean Procter.....	50
Aims and Methods of Studying Latin F. P. Moulton.....	51
Agriculture as a Science for the Elementary Schools Joseph Carter.....	52
A Plea for the Study of Educational Philosophy on the Part of Science Teachers N. A. Harvey..	52
Cause and Cure of Art Unresponsiveness Charles De Garmo.....	53
Economics in the Public Schools George Gunton.....	54
Education for the Trades Charles F. Warner.....	54
Educational Expansion Elmer E. Brown.....	55
Federal and State Interest in Higher Education Robert B. Fulton.....	55
Function of the State University R. H. Jesse.....	56
Give the Children a Chance N. Coe Stewart.....	57
Greek in Secondary Schools Isaac N. Judson.....	58
High Schools and Attendance at College James Russell Parsons, Jr.....	58
How Early May Handwork be Made a Part of School-work Charles R. Richards.....	59
Manual Training in the High School Gilbert B. Morrison.....	60
Ideals and Methods of Economic Teaching Frederick W. Spiers.....	60
Manual Training in Relation to Trade Schools Virgil G. Ourtia.....	61
Necessary Elements in Work and Play and Practical Consequences C. Geraldine O'Grady.....	62
Progress in Education John L. Spaulding.....	62
Physiography W. H. Snyder.....	63
Some of Our Mistakes George M. Grant.....	63
Some Results of Hearing: Tests of Chicago School Children D. P. McMillan.....	64
The Lessons to be Learned by the Teacher of Normal Pupils from Experience in Teaching Arithmetic to the Blind Frank H. Hall.....	65
The Library and the School as Co-ordinate Forces in Education Livingstone McCartney.....	65
The Moral Element in Education W. H. Faunce.....	66
The Relation of Geography to Other Science Subjects William Harmon Norton.....	66
The Relation of Music to Life Thomas Whitney Surette.....	68
The School and the Library; the Value of Literature in Early Education Frederick M. Crunden.....	69
The Teacher as a Social-Economic Power Reuben Post Halleck.....	70
The Teaching of English James H. Harris.....	70
The Textile Arts as Constructive Work Clara Isabel Mitchell.....	71
Value of Truant Schools Mrs. Dwight Goes.....	72
What Constitutes a Business Education I. O. Crissy.....	72
What the Normal Schools Can Do for the Teachers from the Library Side Irene Warren.....	73
The Blue Jay Edward B. Clark.....	75
The Baltimore Oriole.....	76
Book Reviews.....	77

A. W. MUMFORD, Publisher

203 Michigan Avenue, - - - Chicago, Illinois.

Entered at Chicago Post Office as Second Class Matter.

Colored Supplement, Bluejay and Baltimore Oriole, with this number.

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago, Ill.

Branch Office: 1135 Broadway, New York.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$3.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

I want to personally congratulate you on the success of your "Review." It is great.

HARR WAGNER,

July 17, 1901.

Editor Western Journal of Education.

I think the idea is excellent. Such a journal may be made to fill an important field now entirely unoccupied.

Humboldt, Ia., Aug. 26, 1901.

A. D. CROMWELL.

Allow me to congratulate you on the "Review of Education."

Rochester, N. Y., July 9, 1901.

J. W. BALL.

The "Review of Education" makes a good beginning. It is my belief that you will find plenty of readers for such a paper as you have undertaken. The editing of such a magazine will be a difficult task, but if you will give some individuality to the paper, I believe that the teaching profession will be ready to give it a liberal support. I shall watch with interest the progress of the paper, and can assure you of my readiness to serve you in any way in my power.

ALBERT LEONARD.

Ypsilanti, Mich., July 3, 1901.

The Psychology of Childhood

By **FREDERICK TRACY,**

Lecturer in Philosophy in the University of
Toronto.

With Introduction by **PRESIDENT G. STAN-
LEY HALL,** of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

—
This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

—
*Send for complete descriptive list of
Heath's Pedagogical Library, 37 volumes.*

D. C. HEATH & CO., Publishers

Boston

New York

Chicago

The International Encyclopedia

**Best for Home, for the School
or for the Public Library . . .**

**THE WHOLE RANGE OF HUMAN KNOWLEDGE
UNDER ONE ALPHABET.**

1. Geographical Dictionary.
2. Abstract of World's History.
3. Atlas and Gazetteer of World.
4. Handbook of Politics.
5. Digest of Business Law.
6. Handbook of General Literature.
7. An Unequaled Ready Reference
Work for the School, the Library
and the Home.

NEW EDITION NOW COMPLETE.

Entire set delivered at once for cash or on
easy payment plan. Full particulars
and specimen pages sent on
application.

DODD, MEAD & CO., NEW YORK: 372 Fifth Ave.
CHICAGO: 378 Wabash Ave.

AMERICAN EDUCATION

New Series of

NEW YORK EDUCATION

\$1.00 per year

C. E. FRANKLIN, Editor

THE growing circulation and influence of NEW YORK EDUCATION outside of the Empire State make it imperative that the scope of that splendid educational journal be enlarged, and hereafter it will be designated by the name

...American Education...

While the general policy and essential characteristics of the magazine will not be changed, it will be made a journal of equal interest to teachers everywhere. The interests of New York State teachers will be looked after with the same fidelity that has heretofore made NEW YORK EDUCATION unique and invaluable to them.

A postal card mailed to this office will send you a sample September number as soon as it comes from the press.

NEW YORK EDUCATION, 81 Chapel St., Albany, N. Y.

THE TEACHER'S TOOL-CHEST

☞ No mechanic could get employment as a skilled workman unless he possessed a well-stocked Tool-Chest. Let this catalogue be kept at hand for reference when you find that you need tools in your trade.

☞ Those starred (*) are published in The Standard Teachers Library, and may also be had in manilla at 50 cts. each. Those marked with two stars (**) are in cloth, but may also be had in paper at 15 cts. Those marked with a dagger (†) have been chosen by the State Superintendent for the New York State School Library. Those preceded by (T) are specified for use in New York training classes.

Subscribers to *Birds and Nature* or *Review of Education* may order books except *Well's Writing Books*

from this list at 33% discount and they will be sent prepaid.

Send all orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago, Ill.

Books of Reference

(T) *Sonnenschein's Cyclopaedia of Education*, \$3.75.

Knott's Ready Reference Law Manual, \$2.00.

Bardeen's Verbal Pitfalls, 75 cts.

Lawrence's Classified Reading, \$2.00.

The History of Education

† *Williams's History of Modern Education*, \$1.50.

*† *Quick's Educational Reformers*, \$1.00.

Bardeen's Dictionary of Educational Biography, \$2.00.

— *Note Book of the History of Education*, 50 cts.

† *Mark's History of Educational Theories in England*, \$1.25.

Bremner's Education of Women in Great Britain, \$1.50.

Bennett's History of Pedagogics, 50 cts.

Browning's Short History of Education, 50 cts.

Hallmann's Sketches from History of Education, 20 cts.

Uniform Questions in History of Education, 25 cts.

† *Donaldson's History of Education*, \$1.00.

Lane's Elementary Greek Education, 50 cts.

† *Cadet's Port Royal Education*, \$1.50.

Milne's Teachers Institutes, Past and Present, 25 cts.

Grant's Burgh Schools of Scotland, \$3.00.

Stevens's High School of Edinburgh, \$2.00.

Barber's Educational Publications in Italy, 25 cts.

Bardeen's Educational Journalism in New York, 40 cts.

— *Educational Journalism—an Inventory*, 25 cts.

Smith's Schools of Syracuse, N. Y., \$3.00.

Descriptions of School Systems

† *Zimmerman's Methods of Education in the United States*, \$1.00.

Page's Graded Schools in the United States, \$1.00.

Bramwell's Training of Teachers in the United States, \$1.25.

Burstall's Education of Girls in the United States, \$1.25.

*† *Bardeen's Roderick Hume, the New York Teacher*, \$1.25.

— *† *Commissioner Hume, a story of N. Y. Schools*, \$1.25.

*† *Riddle's Nicholas Comenius, ye Pa. Schoolmaster*, \$1.50.

*† *Grasby's Teaching in Three Continents*, \$1.50.

State Education for the People, \$1.25.

Bennett's National Education in Europe, 15 cts.

Arnold's Reports on English Schools, \$2.00.

A Day of my Life at Eton, \$1.00.

† *Parsons's Prussian Schools*, \$1.00.

— † *French Schools*, \$1.00.

Biographies of Noted Educators

Bardeen's Dictionary of Educational Biography, \$2.00.

*† (T) *Quick's Educational Reformers*, \$1.00.

Hallmann's Luther, Bacon, Pestalozzi, Pére Girard, Diesterweg, and Froebel, 20 cts.

*† *Carlisle's Memoirs of Ascham and Arnold*, \$1.00.

Meiklejohn's Life of Dr. Andrew Bell, \$1.00.

* *George Birkbeck, Pioneer of Popular Education*, \$1.50.

† *Harris's Horace Mann*, 50 cts.

Monroe's Henry Barnard, 50 cts.

Portrait of Edward A. Sheldon, for framing, \$1.00.

John Amos Comenius

Portrait of Comenius, for framing, \$1.00.

*† *Laurie's Life and Works of Comenius*, \$1.00.

The Orbis Pictus of John Amos Comenius, \$3.00.

Butler's Place of Comenius in Education, 15 cts.

Maxwell's Text-Books of Comenius, 25 cts.

Quick's John Amos Comenius, 15 cts.

Life and Works of Pestalozzi

Portrait of Pestalozzi, for framing, 25 cts.

*† *DeGuimps's Pestalozzi: his Aim and Work*, \$1.50.

† *Pestalozzi's How Gertrude Teaches her Children*, \$1.50.

— *† *Letters on Early Education*, \$1.00.

† *Rooper's Object Lessons, or Words and Things*, 50 cts.

Hoozee's Pestalozzian Arithmetics, Parts I, II, \$1.00.

Froebel and the Kindergarten

Portrait of Froebel, for framing, 25 cts.

† *Autobiography of Friedrich Froebel*, \$1.50.

Letters of Friedrich Froebel, \$1.50.

Hanschmann's The Kindergarten System, \$2.00.

† *Shirreff's Kindergarten System*, \$1.00.

† *Essays on the Kindergarten*, \$1.00.

† *Marenholz-Buelow's Child and Child-Nature*, \$1.50.

† *Perez's First Three Years of Childhood*, \$1.50.

— † *Hallmann's Primary Helps*, 75 cts.

— *The New Education, Vol. VI*, \$2.00.

Meiklejohn's The New Education, 15 cts.

Kriege's The Child and Child Nature, \$1.00.

School Law

* *Bardeen's Manual of Common School Law*, \$1.00.

Johnson's School Law for Training Classes, 50 cts.

Uniform Questions in School Law, Answered, 25 cts.

Code of Public Instruction, New York, \$3.50.

Marble's Powers and Duties of School Officers, 15 cts.

State Education for the People, \$1.25.

Harris's General Government and Education, 15 cts.

Canfield's Rural Poor and Higher Education, 15 cts.

Northrop's High Schools, 25 cts.

Emerson's Latin in High Schools, 25 cts.

Bardeen's Effect of College-Preparatory High School upon

Attendance and Scholarship in Lower Grades, 15 cts.

— *Continuous Contracts for Teachers*, 50 cts.

— *Taxpayer and the Township System*, 25 cts.

— *Problems of City School Management*, 25 cts.

Denominational Schools, Discussion of 1899, 25 cts.

Cooper's Compulsory Laws and Enforcement, 15 cts.

Miller's Education as a Department of Government, 15 cts.

The Bible in the Public Schools, \$1.00.

† *Karoly's Dilemmas of Labor and Education*, \$1.00.

The Teacher and His Qualifications

Ballard's Arrows, or Teaching a Fine Art, 75 cts.

Bardeen's Teacher as he Should Be, 25 cts.

— *Teacher's Commercial Value*, 25 cts.

— *Teaching as a Business for Men*, 25 cts.

— *† *Teaching as a Business, Four Addresses*, \$1.00.

— *Continuous Contracts for Teachers*, 50 cts.

— *† *Roderick Hume, the Story of a N. Y. Teacher*, \$1.25.

— *† *Commissioner Hume, a Story of N. Y. Schools*, \$1.25.

*† *Riddle's Nicholas Comenius, ye Pa. Schoolmaster*, \$1.50.

Sheely's Anecdotes and Humors of School Life, \$1.50.

Ellis's Tales Told out of School, \$1.00.

Hooper's Fifty Years in the Schoolroom, \$1.00.

*† *Northend's The Teacher and the Parent*, \$1.00.

Blodgett's Relation of a Principal to the Community, 25 cts.

*† *The Teacher's Mentor*, \$1.00.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price: Two cents each assorted as desired; the 424 for only \$4.24; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

- | | | |
|----------------------------------|--------------------------------------|-------------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Turnstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parrakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowned Pigeon. |
| 21 Bluebird. | 72 Sora Rall. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbills. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Woodpecker. |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | 147 Bartramian Sandpiper. |
| 47 Indigo Bird. | 98 Snow Bunting. | 148 Nightingale. |
| 48 Night Hawk. | 99 Junco. | 149 Roseate Spoonbill. |
| 49 Wood Thrush. | 100 Kingbird. | 150 Dickcissel. |
| 50 Catbird. | 101 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rheas.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cinceraia.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany—(Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 { New England Aster.
- 348 { Late Purple Aster.
- 349 Wild Yellow or Canadian Lily.
- 350 Vesper Sparrow.
- 351 Calico Bass.
- 352 Mountain Lake.
- 353 Fruit: Banana.
- 354 Oswego Tea or Bee Balm.
- 355 { Fringed Gentian.
- 356 { Closed or Blind Gentian.
- 357 { Tall or Giant Sunflower.
- 358 { Black-eyed Susan or Oxeye Daisy.
- 359 Wild Columbine.
- 360 American Redstart.
- 361 Trout.
- 362 Ocean Waves.
- 363 Domestic Fowls.
- 364 Western Willet.
- 365 Buffle-Head.
- 366 American Eared Grebe.
- 367 Louisiana Tanager.
- 368 Luna and Polyphemus Moths.
- 369 Prong-horned Antelope.
- 370 Sensitive Plant.
- 371 Medicinal Plant: Almond.
- 372 Western Horned Owl.
- 373 Long-crested Jay.
- 374 Fulvous Tree-duck.
- 375 Red-breasted Sapsucker.
- 376 Promethan and Scropan Moths.
- 377 Irish Setter.
- 378 Pitcher Plant (Nepenthes).
- 379 Medicinal Plant: Mandrake.
- 380 Hawk Owl.
- 381 Knot or Robin Snipe.
- 382 White-winged Crossbill.
- 383 Townsend's Warbler.
- 384 Water Shells.
- 385 Collared Lizard.
- 386 Fruit: Apple.
- 387 Medicinal Plant: Vanilla.
- 388 American Rough-legged and Young Red-tailed Hawks.
- 389 Short-billed Dowitcher.
- 390 Great-tailed Grackle.
- 391 Hooded Warbler.
- 392 Land Shells.
- 393 Gila Monster.
- 394 Medicinal Plant: Cassia Cinnamon.
- 395 Fruit: Pomegranate.
- 396 Owl Parrot.
- 397 Gray Parrot.
- 398 White Pelican.
- 399 Marbled Murrelet.
- 400 Black Bear.
- 401 Pond and River Shells.
- 402 Fruit: Orange.
- 403 Medicinal Plant: Pepper.
- 404 Crested Curassow.
- 405 Harlequin Duck.
- 406 Canada Grouse.
- 407 Dovekie.
- 408 Beaver.
- 409 Marine Shells.
- 410 Fruit: Lemon.
- 411 Medicinal Plant: Cubebs.
- 412 Audubon's Oriole.
- 413 Marbled Godwit.
- 414 Rusty Blackbird or Grackle.
- 415 Surf Scoter.
- 416 American Elk.
- 417 Nautilus Shells.
- 418 Flowers: Mountain Laurel.
- 419 Trailing Arbutus.
- 420 Medicinal Plant: Hops.
- 421 Bullock's Oriole.
- 422 Sanderling.
- 423 Great Northern Shrike.
- 424 Brandt's Cormorant.
- 425 Buffalo.
- 426 Agates.
- 427 Flowers: Great Mullein.
- 428 Moth Mullein.
- 429 Medicinal Plant: Cocoa Fruit.

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Receiver March 24.)

Telegram.—Can you take commercial department University of Wyoming, twelve hundred, begin April first? Telegraph.—*To Principal W. B. Carhart, Coeymans, N. Y., March 24.*

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart, March 25.*

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—*To President Smiley, March 25.*

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley, March 25.*

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—*To Mr. Carhart.*

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart, March 26.*

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—*To Mr. Carhart, March 26.*

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart, March 26.*

Telegram.—Carhart telegraphs he will start Thursday.—*To President Smiley, March 26.*

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart, March 27.*

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—*To Mr. Carhart, March 27.*

The School Bulletin Agency C. W. BARDEEN, Syracuse, N. Y.

The Education of Teachers.

By W. H. PAYNE, Ph.D., LL.D., Chancellor University of Nashville.

Dr. Payne is a man with a message—the sort of message that compels attention. One must hear him through, though one may not agree with him all the way through. He goes to the very core of the matter, and having found it, talks with us about it face to face as a man speaketh unto his friend. There are eight wonderfully stimulating chapters, every one of which one will want to read over and over again. It is an exceedingly thought-provoking book.

"The Education of Teachers, by W. H. Payne, is a valuable collection of essays on the science of education. The book commands instant attention and all its eight chapters are worth many perusals, for they contain the result of profound thought and patient study on the knotty problems of the education of teachers. Dr. Payne, in his chapter on 'Teachers to be Educated, Not Trained' says that over the entrance of every normal school there should be this legend: 'Teaching: the noblest of the professions, but the sorriest of trades.' He claims that teaching is a spiritual art and should be ranked with music, poetry, etc., and not with the mechanical arts; and to gain the best results, principles and not rules should be the aim. He clearly sets forth that good teaching kindles enthusiasm, establishes motive, fortifies the will and inspires the soul to noble acting. Indeed he considers that the highest motive of the teachers should be the love of doing good. One is tempted to quote the whole book, even to the two splendid papers in the appendix, the subjects of which are: 'The Universal Vocation,' and 'A Theory of Life.' Dr. Payne's style is clear and convincing, and the

book is bound to be widely read. It has the stamp of a scholar and thinker."—*The Bookseller, New-dealer and Stationer, New York.*

Dr. Payne's masterly equipment for his task, and his many years' experience in an educational institution of such high grade as the Peabody Normal School, at Nashville, in addition to the fact that his students are scattered throughout every one of the Southern and Southwestern States, will furnish an introduction and a recommendation for his book such as a few authors can hope or expect to gain.

Dr. Payne deals with his subject as might be expected, from the highest standpoint, yet with a grasp of comprehension and a practical understanding that render it at once admirable in tone and adapted to the needs of all.—*News, Richmond, Va.*

"I have just received a copy of 'Education of Teachers' by Dr. Payne, from your house. I am charmed with it and now think I will place it in the hands of the pedagogic class this coming school year."—*J. H. Bayer, Cumberland City, Tenn.*

8mo. Cloth. Retail Price, \$1.50.

THE B. F. JOHNSON PUBLISHING COMPANY,
Richmond, Va.

A Tonic and Nerve Food

Horsford's Acid Phosphato

Nourishes, strengthens and invigorates the body,
restores the appetite and induces restful sleep.

The genuine bears the name "HORSFORD'S" on label.

Mr. Edward B. Clark, a local ornithologist and writer, has written "Birds of Lakeside and Prairie," which A. W. Mumford & Co. of this city will publish soon. Mr. Clark's articles on bird topics have attracted bird-lovers in a widely scattered territory, and it has been this which encouraged him to collect in book form the best of his work. There is much new matter in the volume, however, gleaned from numerous trips in the middle West, a territory left uncovered by writers on this subject. The book will contain sixteen colored illustrations.—*Chicago Tribune*, Sept. 6, 1901.

The University of Chicago.

THE SCHOOL OF EDUCATION.

FRANCIS W. PARKER, Director,

WILBUR S. JACKMAN, Dean.

Professional School for Teachers. Elementary School from Kindergarten to Eighth Grade, inclusive, constituting a Model School for Observation and Practice. Full equipment of apparatus. Well selected Library. Faculty of trained teachers. University credit. For further particulars address

THE UNIVERSITY OF CHICAGO, Dean of The School of Education, Chicago, Illinois.

GOOD MAPS

are necessary to good teaching. Our maps are of that kind. If you are thinking of buying maps to assist you in your teaching of Geography, History and allied subjects, why not get the best and latest maps made?

Our illustrated catalogue will tell you about our new maps and new editions. It can be had for the asking.

Rand, McNally & Co.,
PUBLISHERS.

Chicago.

New York.

BIRDS OF LAKESIDE AND PRAIRIE

By EDWARD B. CLARK.

16 Colored Plates. Ready Nov. 1. Price, \$1. Orders received in advance of publication, 75 cents.

THIS book will contain field sketches of bird life in the great middle west. Mr. Clark for years has been a close student of nature in a section of the country where wild bird observers have been many and bird writers have been few. The author takes his readers afield with him and puts them in close touch with our feathered friends of lakeside, woodland and prairie. The bird byways of Illinois, Indiana, Michigan, Wisconsin and other great middle western states are thoroughly explored. Mr. Clark is known to the reading public through his many bird articles which have appeared in the *Chicago Tribune*, and in the different magazines of the country. He is perhaps still more intimately known to middle western readers by the articles from his pen which have appeared several times a week on the editorial page of the *Chicago Times-Herald*, now the *Record-Herald*. The colored illustrations in "The Birds of Lakeside and Prairie" will be from our colored plates slightly reduced in size. Mr. Clark's work is characterized by a fine literary style.

A. W. MUMFORD, Publisher.

203 MICHIGAN AVE.,

CHICAGO.

The Review of Education.

VOL. VII.

CHICAGO, SEPTEMBER, 1901.

No. 2.

EDITORIAL COMMENT.

The fortieth annual meeting of the National Educational Association, at Detroit, was an unqualified success. President Green's program was carefully thought out and well sustained; the attendance was large and representative, and there were more papers than usual that were noteworthy. The Council was fortunate almost beyond precedent. Dr. Harris' opening paper on "Isolation in the School" was a careful philosophical study which ought to have been read and pondered long before it was debated. Professor Brown's thoro and well-proportioned review of the educational progress of the year speaks for itself in another part of this issue of the REVIEW. The two papers on "The Lessons of the Educational Exhibits at Paris," by Miss Anna Tolman Smith of the Bureau of Education and Deputy Superintendent Howard J. Rogers of New York, may fairly be described as extraordinary by reason of their power of exposition and their philosophic grasp of the educational movements now in progress the world over. Mr. Brereton's capital contribution to the discussion of these papers only heightened the interest in them and their topic. Later in the week Dr. G. Stanley Hall brought together, in an address called "The Ideal School," a number of his interpretations of recent investigations in psychology and education. Stimulating and brilliant as the address undoubtedly was, it suffered from an undue dogmatism, and what seemed to many to be a sadly unscientific lack of proportion between its facts and its inferences.

The general sessions of the Association were all helpful. Bishop Spaulding's oration on "Progress in Education," Professor George E. Vincent's paper on "Social Science and the Curriculum," Principal Grant's address on "Some of Our Mistakes," and Mr. Cloudesley S. H. Brereton's lucid and good-tempered setting forth of the factors at work in present day English education, stood out as the most striking contributions of the week. It was a genuine pleasure to welcome so well-equipped and so philosophical a student as Mr. Brereton as the representative of English education, and his return to the United States will be eagerly looked for by hosts of his new friends.

The annual business meeting was the best attended in many years, nearly four hundred active members being present. This is an excellent omen, and we hope that the time will come when every active member at the meeting will make a point of attending the business session. The new president, unanimously nominated and elected by acclamation, is President W. M. Beardshear of the State Agricultural College at Ames, Iowa, an old and popular member of the Association, who well deserves the high honor that he has won.

The finances of the Association are in good condition, altho there was no addition made to the permanent fund—which remains at \$88,000—during the year. The income from the permanent fund was \$3,883.03, and the cost of administering it was \$15.19. Despite the relatively small attendance at Charles-

ton a year ago, Treasurer Greenlee was able to report a net balance for the year of \$316.37, and cash on hand amounting to \$4,113.04.—*Educational Review*.

Whatever defects may be debited against the N. E. A. from a theoretical standpoint, practically it is the greatest professionalizing force in the educational field. Its conventions have none of the narrow spirit and odor of trades-unionism that usually characterize the national meetings of more closely organized associations of people united for the promotion of common interests. The very lack of organization seems to be conducive to the sort of breadth and expansion so essential to the stimulating of enthusiasm and good fellowship. This fact impresses itself more and more the longer one attends the annual conventions of the N. E. A. Like the old darkey Dr. McIver tells about, who was asked why he preferred freedom coupled with want to slavery with flesh-pots, "It is de looseness ob dis liberty dat I enjoys."

After all the greatest gain one can take along from a national convention is the conviction that one is engaged in a grand work, and that one's co-workers are people to be proud of. Detroit furnished another striking example of how rich a harvest of good things a well-conducted N. E. A. meeting supplies.

To begin with, Detroit is a beautiful city. Nowhere in America are there more charming residence streets, bordered by well-kept lawns and flower gardens. The accommodations for visitors are all that can be desired; there are several fine parks, chief among them charming Belle Isle, and then there is that magnificent river with its rich, deep beryl-green color. Many of the visiting educators yielded to the fascinations of a trip on Detroit river, and the memory of it will remain forever associated with the N. E. A. convention of 1901.

The local arrangements for the entertainment of the association were perfect in every way. Nothing was left undone that could in any way add to the comfort of the visitors and the enjoyment of the occasion. The welcome extended by Governor Bliss, State Supt. Fall and President Angell for Michigan, and by

Mayor Maybury and Supt. Martindale for Detroit was a hearty one. There were evidences on all sides that the entertaining state and city were really proud of their visitors, and wanted to give them a jolly good time. Mr. Oliver G. Frederick, who acted as chairman and executive secretary of the local organization, deserves a special vote of thanks for the completeness and smooth running of the machinery for taking care of the giant convention.

The programs of the general sessions and of the National Council of Education were in many respects the most satisfactory ever prepared for the mid-summer convention. At any rate there were several important features, the significance of which is bound to become more manifest as the years roll on.—*The School Journal*.

Dr. William M. Beardshear, the newly elected president of the N. E. A., was born near Dayton, Ohio, in 1850. He entered the army as drummer-boy at the age of fourteen, and served later as cavalryman until the close of the war. He was educated in the rural schools, later at Otterbein University, and still later at Yale. He received his degree from the latter institution in 1878. He served as pastor in one of the city churches in Dayton, Ohio, until 1881, when he was elected president of Western College at Toledo, Iowa, which position he held until 1889, when he was elected superintendent of the public schools of Des Moines, Iowa. This position he held for two years, leaving it in 1891 to assume his present position, that of president of the Iowa State College at Ames. In 1887 he was appointed a member of the United States Indian commission by President McKinley. Dr. Beardshear is a lecturer and writer of note upon educational and literary subjects. His charming personality is well set forth by Elbert Hubbard in *The Philistine*, as follows:

"I wonder if you know Beardshear, of Ames, Iowa? There's a man for you. He is six feet five, long-armed, lank, lean, homely—homely as Abraham Lincoln. I do not know Beardshear's history or pedigree, but he makes me

think, at once, of the East Tennessee mountaineers. Beardshear is an educated moonshiner. A grave, silent man is Beardshear, but now and again a contagious smile plays across his features, like the vibrating of the leaves when kissed by a summer breeze. At other times Beardshear seems shrouded in a mist of melancholy. Beardshear is a sun-worshiper—gets up at dawn to see the sun rise; makes prayers to the planets, and talks with God as he walks upon the street. Beardshear has nothing to conceal. You can sit in his presence without talking, and yet not be embarrassed. He is as fine as Walt Whitman. You can speak the truth to this man—he will not misunderstand you. He will forgive to seventy times seven. You are not handsome, dear old Beardshear—I cannot tell a lie—you have the bark on, and your necktie is askew—but anything you want in East Aurora is yours for the asking.”

The National Educational Association, which semi-officially represents the great body of public school teachers of the United States, at its fortieth annual meeting in the city of Detroit last week issued a very significant platform, which we should be glad to see printed in full and widely circulated. This platform demands provision for free education under the auspices of the Federal Government in all federal territories, including the new possessions; it urges that all such public education in United States territory should be placed under the direction of the Bureau of Education; the school-house in every state and territory should be the center of the educational life of the community, the place where literary and social meetings may be held, and where the public library should be housed; education should include the development of the ethical, physical and æsthetic nature of the child as well as its purely intellectual nature; the system of education should include every grade of school from the kindergarten up to and including the university, open to every boy and girl of our country; legislation respecting education should be under the general direction of educational experts, and should lead rather than wait upon

public sentiment; children should be protected by law from ignorance as from abuse, neglect and hunger, on which ground compulsory education is defended; expert supervision of schools in country as in city is needed, and the consolidation of rural schools and the transportation of pupils, already attempted in some states, should be extended; normal schools should be maintained in all the states, and thorough provision should be made to secure high standards both for school architecture and for teaching. We do not remember ever to have seen from any individual as complete and comprehensive a statement of public educational needs and the methods of providing for them as is furnished by this platform. With some question as to the extent to which education should be made compulsory, and with a serious question whether in the older communities education should extend to and include the university, we desire to add our vote and our indorsement of this admirable platform, and we desire to lay special stress upon the demand that systems of education under federal control, and if necessary at federal expense, should be maintained in all territories of the United States, under the direction of the Educational Bureau. If this policy had been pursued in Utah, we should not now be confronted with a Mormon problem; if this principle, modified to suit the exigency, had been applied at the close of the civil war to the educational problem in the southern states, we should not be confronted with the present race problem there; if it had been pursued from the beginning in our Indian reservations, we should now have no Indian problem; and if it is not pursued in Porto Rico and the Philippines, we shall have very serious problems confronting us in those countries, and growing more serious as the years go on.—*The Outlook*.

Two subjects seem to have proved most interesting at the meeting of the council of the National Educational Association at Detroit. One was the report of the committee of fifteen on the subject of a national university at Washington.

This body, of which President Harper

of the University of Chicago was chairman, reported against the scheme; they went further and offered a resolution providing for a non-governmental institution to be called the Washington Memorial Institution to be maintained at Washington, D. C. A good deal of opposition to the report was manifested, of which President Baker, of the University of Colorado, was perhaps the most prominent leader, and finally a resolution was adopted "that the report of the committee be received and the committee discharged; and that, while we express our appreciation of the committee's efforts, we are not prepared to abandon the declaration, often repeated in this council, in favor of a national university." The other subject was the address of President Hall, of Clark university, in which he declared his opinion that the higher education often unfitted young women for the duties of wives and mothers; that girls should be educated on different lines from boys, and that it would be wise to separate the sexes even in the high schools. In the discussion it appeared that the easterners were generally on Mr. Hall's side and the westerners almost unanimously against him.—*Journal of Education*.

The field of education, in the broadest sense of this expression, was well and thoroughly covered by the two hun-

dred and sixty-three persons who appeared on the programs of the National Educational Association at the Detroit meeting.

Interest in education will attract people from the remotest corners of the earth to such a meeting as that held in Detroit. Dr. J. B. Zubiour, who is a member of the Board of Education of the Argentine Republic, came from Buenos Ayres.

In the United States there are three hundred Indian schools, with an attendance of twenty-five thousand pupils.

In the declaration of principles adopted by the National Educational Association there is this paragraph:

The National Educational Association recognizes the principle that the child has the same right to be protected by law from ignorance as from abuse, neglect and hunger; and it therefore records with approval that many of the leading states of the Union have compulsory education laws upon their statute books.

Colonel Francis W. Parker is more and more interesting as an educational inspiration.—*Journal of Education*.

SOCIAL SCIENCE AND THE CURRICULUM.

BY PROFESSOR GEORGE E. VINCENT,
University of Chicago.

Rousseau looked back longingly to the days when prehistoric men lived in primal virtue a happy and blameless life. In somewhat the same way, when we confront the complex and baffling problems of to-day we think enviously of the simple existence of our primitive ancestors. They held neither convention nor institute. They were innocent of round tables. They solved the puzzles of life one by one as best they could, but they reflected little on their aims and methods.

The education which they gave their children fitted them for the life of the group. The simple sum of social knowledge was easily communicated. The primitive dexterities, handicrafts, and social virtues were passed on chiefly by contact of children with parents; where each man knew all there was to know, and could do all that anyone did, education was relatively simple.

But as knowledge and dexterity increased, they came to over-burden single minds; division of labor, intellectual as well as manual, began. Primitive philosophy became the province of the "medicine men," whose successors are the philosophers, theologians, scientists, preachers and teachers of today.

With the centuries the growing mass of human knowledge has been more and more minutely subdivided; man's world has been resolved into its elements. But along with this analysis has always gone the effort to patch the pieces together, to keep man's experience whole.

This great antithesis appears in our current educational theory and practice. On the one hand we find the constant pressure of new subjects which clamor for admission to the curriculum; on the other hand, we hear the cry for correlation, co-ordination, concentration. It is urged that the life of the child must not be broken up into unrelated fragments; that all these artificially divided studies must be related and kept in unity in the child's growing mind.

Still another tendency asserts itself.

We hear much in these days of "the social aspects of education," of "the sociological basis of education," of "the school as a community," and of "school and society."

If one may risk the interpretation of vague movements of thought such as these, I venture to assert that this social tendency of education is only another aspect of the inevitable process by which men struggle to see things whole. The conception of the origin and development of the nature and end of society sweeps into unity all the fragmentary knowledge of mankind. The socializing of education, then, is an effort to give pupils little by little a way of looking at society, which shall enable them gradually to see things in their relations, to order conduct, and to contribute something to the stability and enrichment of the life they live in common with their fellows.

Those who cultivate history, economics, politics, anthropology, and sociology and who believe that social science in a large sense has an all-important role to play in education, are naturally concerned to know what relation these studies may sustain to the elementary and secondary schools. They know that these subjects are at present almost wholly university pursuits, but they remember that certain of the studies which in recent years have crept into the high school and the grades have made their way downward from the institutions of higher learning. The study of science affords a conspicuous illustration. Geology and botany, zoology and physiology, gradually lose their identity as they are traced through the high school down into the grades, where they merge into the undifferentiated protoplasm called "nature study." This process may well serve as a model to those who are anxious to see the social sciences influence the earlier years of the school.

And yet, I fancy that none of these social scientists, with all their desire to gain admission to the grades, wish to increase the number of subjects now in-

cluded in that interesting mosaic known as the common school curriculum. They simply ask for a larger interpretation of the subjects which are now taught, or perhaps better, the use of these subjects, enriched in some degree, as vehicles of social knowledge and ideals.

THE TEACHERS' SOCIOLOGICAL POINT OF VIEW.

Education is essentially a socializing process. Every group educates its members by many devices. This education is always going on. The school is only one agency of this process, and it must adjust its aims and methods to the great social forces which are molding the young in a multiplicity of ways. A study of the social sciences suggests to those who control the schools the principles which must be followed, as well as the materials of instruction and inspiration by which the development of the young into socialized citizens may be furthered.

Social science has already a place in the curriculum. Almost every subject now taught has its social aspects, and these are in many cases emphasized. But not until the teacher looks at these subjects from the point of view of social science can the curriculum yield its richest results in knowledge and character. The plea I have to make, then, is not a plea for anthropology in the second or third grade, nor a demand for sociology in the high school, but an urgent appeal for the unifying of the curriculum by a social philosophy concealed in the lower stages from the pupils but clearly present in the mind of the teacher.

FROM EXPERIENCES TO SCIENCE.

Let us trace for a moment the inevitable process by which knowledge grows with advancing years in the mind of the child. In the first stage we have the isolated bits of knowledge, related here and there, and now and then to the shifting interests of the young mind; the story complete in itself, the fact or explanation which solves the problem of the moment. The eager growing mind stores itself with these fragmentary, fascinating things. Then follows the stage in which small groups of these interesting images are brought into relationship. The exhilaration which comes with this putting

of things together is known to every teacher. Gradually the process grows wider and more definite. The smaller groups of fact are merged in ever larger and more significant unities until finally with the upper grades and the high school the period of systematic reflection dawns. The early experiences of childhood are re-read and re-interpreted in the light of the larger knowledge. Generalization in its legitimate form is made possible by the preparation of the earlier years. It is thus that nature study in the kindergarten and in the lower grades is gradually organized into the "ologies" of high school and college.

In similar fashion, the social scientist demands for children the concrete knowledge and experiences out of which, in due time, logical sciences and practical wisdom may develop.

PRESENT INTERESTS AND THE ULTIMATE END.

In providing appropriate materials, two aims must be kept constantly in mind; the genuine interests of the child at different stages of his growth, and the maturer view of life toward which this growth is to be guided. The child's interests are at first supreme, but even if this be granted, there are choices of appropriate fact and occupation, and these choices must be determined by the ultimate end in view.

The socializing movement is well under way. In kindergarten and elementary school, social materials have long been recognized. The simple industrial processes of weaving, clay modeling, wood working and food preparation have been utilized, but in rather too conventionalized a way. We note in Prof. John Dewey's theory and practice the beginnings of a movement back to nature, or rather back to primitive manufacture. Children weave baskets rather than paper mats. They mold pottery rather than balls and cubes. They make looms and wagons and houses rather than conventional elements of carpentry. They cook food for actual use instead of making premature experiments in physics and chemistry. Thus manual training may be socialized in the sense that it may be brought closer to social life and its actual activities past and present. In later stages it becomes

inevitably and properly more conventionalized, specialized and concise.

About these industrial processes naturally gather ideas as to the utilizing of raw materials, the working of them into finished products, the comparison of crude, primitive processes with the highly organized production of today. It is impossible to deal with these topics without grouping about them many facts of social and industrial history; thus the idea of change in human affairs, the ideas of organized industry and of commerce gradually emerge from these activities and interests of the early grades.

It may be remarked in passing that the committee may well question the value of economics in the high school so long as the lower grades are not supplying the elementary ideas which economic science generalizes and arranges in logical form.

But in the investigation of industry and commerce, great facts of diversified natural conditions of mineral resources, of agricultural products of varying climates of transportation by land and sea are inevitably involved.

THE SOCIALIZED CURRICULUM.

Geography is being vitalized by this contact with human life and institutions. It is no longer an isolated and dull pursuit. It becomes a study of man's home, the scene of his conquests. The influence of natural conditions on the industry and life of man becomes a fascinating topic. The determining effect of mountain and plain, of river and pass on the course of history emerges from one concrete illustration after another. On the other hand, geography is only another aspect of nature study. The lives of plant and insect, bird and beast, take on new meaning when their stories are told in relation to their environment and to mankind. The work of Col. Parker and his staff has demonstrated the value of socialized geography in relating all the subjects of the program.

The formal pursuits of the curriculum so-called lend themselves readily to the social point of view. The reading book will undoubtedly become more and more the vehicle of appropriate descriptions and anecdotes which bear upon social life. Much of the old literature will remain, but some of it is already being re-

placed by stories of primitive life, of typical industrial processes and tales and songs not only of past heroism but of duty bravely done today.

It is needless to indicate the ways in which number work is now related to manual training, history, geography, nature study, and other subjects of the school program.

INSTRUMENTS FOR ENRICHING INSTRUCTION.

But to the study within the school must be added the visiting of industries and other institutions. As a matter of course, the teacher of nature study sends her pupils afield for material or accompanies them on expeditions into wood and meadow. A few wise teachers are in the same way making the mill, the railway shop, the factory, the power-house, the post-office, the press-room, the fire station, definite means of instruction for their pupils. There is no more common blunder than to suppose that the every-day life of the community is understood or interpreted by its citizens. The increasing use of stereopticon and slides will not only enrich the study of history, geography and science, but will add vastly to the means of instruction in industrial and institutional life. Sets of slides will trace the progress of iron ore and coal into steel, of cotton plant and wool into cloth, and will show the men and machinery at work in mine and mill, in field and factory. The lantern will display rural life to city children, and in turn carry these urban pupils into the country. The interests of growing children may be easily guided in such a way that they will appropriate a great mass of material concerning the institutional life of their social group. This will be of value at the time. It will serve as a means of genuine education, and later on will give deeper insight into the nature of social forces.

As pupils advance through the upper grades into the secondary school, history and literature in conjunction with geography and science furnish the best instruments of social instruction.

THE SOCIAL SIDE OF HISTORY.

History enriched by some knowledge of primitive life, some conception of

economic organization and its influence on men, will become more than the records of battles and dynasties. The idea of social change, of cause and effect in history, may be more and more consciously introduced and discussed. The past must be to a large extent interpreted in terms of the present. The characters and deeds of Greeks and Romans, of Teutons and Franks can be understood only by those who have some insight into the universal motives of mankind. The attempt to imagine the past will be futile or feeble on the part of those whose activities and interests in the present have been narrowed and formalized. The child who has made a basket or woven a tiny blanket can reproduce more vividly the life of the American frontier than one who has known nothing of such tasks.

The annals of the pupil's own family as an aid to the study of history have been almost wholly overlooked. The earliest ideas of change and continuity in human affairs the child gains at the knee of father or mother. "Tell me a story about when you were a little boy" is the familiar formula. The story of life when parents were young is full of fascination for the child. The still remoter chronicles of grandfather and grandmother fill him with wonder over the lapse of time; while his small imagination fairly breaks down as it tries to conceive the life of great-grandparents and other dimly distant ancestors. The study of family histories and reports upon them in the school may be made points of departure in the lower grades for numberless excursions in geography, in the history of the westward migration of population in the United States, in the means of transportation, and in the housing and the industries of the frontier. Where the pupil's families are quickly traced back over sea, the longer journeys and the wider relationships are full of suggestions.

One refrains from details which have no place in what must be a brief survey of so wide a field. Enough has perhaps been indicated to emphasize the principles involved.

LITERATURE, MATHEMATICS, AND NATURAL SCIENCE.

Literature as a means of social instruction has inexhaustible possibilities. The

conception of literature as a product, an expression of social life, can be developed. Language itself thought of as a social growth takes on new meaning. The interpretation of a piece of great literature, the reading into it of men's motives, the asking: "Is it true to life?" start fruitful inquiry and illuminating discussion. A careful reading with a class of one of Emerson's essays is a lesson in psychology, in ethics, in history, in language, in literature all at once—and what is noteworthy, the pupils never suspect that these profound names are lurking beneath the delightful exercise.

The value of the problem in instruction has been fairly recognized in mathematics, physics and chemistry, but in less exact subjects it has been too much neglected. After all, the real test if not the best means of "correlation" is problem solving—the bringing to bear all the necessary elements of knowledge upon a given concrete situation. The possibilities of problem setting are being studied. It is not utopian to set social problems, to describe situations and to invite solutions. The teacher with a sand box and a few toy houses may set the problem of building a village which shall have houses, schools, churches, factories, stores, etc., appropriate for a specified population in an environment and with transportation facilities indicated at the outset. The discussions and criticisms involved in such a task could not fail to be fruitful. This is only a suggestion of the devices available for stimulating reflection upon the various aspects of social life.

MORAL CHARACTER.

So far stress has been laid upon instruction, upon gaining insight into the nature of social organization, but education is more than instruction. Unless the pupil from all his study of industry and nature, of geography and commerce, of history and literature, gathers appropriate sentiments, selects worthy types of personality and conduct, comes to respond with bounding pulses to the best ideals of personal development, of social service, of loyalty to country, of devotion to righteousness, the whole effort has been futile. Knowledge which is not transmitted into character is abortive.

Yet the problem of moral education is baffling. The dogmatic teaching of virtue is all but hopeless. Ideals are assimilated from the community in so subtle a way that it seems almost impossible to control the individual's development. The teaching of formal ethics comes at a later stage of reflection, and it is a question whether moral philosophy in college has much effect upon character.

The real task is to influence those instinctive unreflective approvals and disapprovals with which the individual looks upon men and conduct. There are virtues which our times demand, which it is hard to cultivate. A high ideal of commercial honor, a passion for truth, and tolerance, an admiration for political integrity, a deep sense of civic duty, are not unhampered growths in a society like ours.

TRAINING FOR AMERICAN CITIZENSHIP.

The ideal of self-government in our schools arouses interest. The autocracy of the school room seems an ill preparation for life in a democracy. The experiment of self-control is worth trying, and there is reason to hope for valuable results, but we are not surprised to learn that the ethical standard of the outside community often dominates the school. The "ring" or "machine," favoritism, gross partisanship, wire-pulling, log-rolling, often find their way into the student-government. To arouse feeling among the pupils against forms of conduct which are tolerated, or secretly if not openly admired in the outside world is a difficult and delicate task.

But little by little through the years, if the right materials are gathered, if sound and sane suggestions come from personalities which inspire respect and affection, these higher impulses may be strengthened into stable virtues. History and literature and life must be searched for noble personalities and high types of conduct, and these must be held up for admiration and emulation wisely, persistently, untiringly. In the earlier years discussion and analysis have little place.

The emotions come without conscious reflection. Later, comparison and debate, if they do not degenerate into arid dialect, serve a useful purpose. But the emphasis in the socializing of education should rest upon the early stages where character is laid down in emotional valuations of men and morality.

It is in this field of moral education that I would emphasize the plea which Professor Patten made some years ago for contemporary heroes. Let pupils search the press and the community for high types of conduct. The fireman, the railway engineer, the life-saver, the miner, the factory hand, the reformer, the philanthropist of to-day should aid the formation of ideals no less than mediæval crusaders or the heroes of Greece and Rome. There are virtues universal, virtues of purity and courage, of loyalty and self-sacrifice, admirable in all lands and in all ages; but these virtues are interpreted by every people and every epoch. The virtues of the past must be translated into those of the present. As abstract virtues they are lifeless things; they must be incarnated in personalities before they can have power over the young. Here literature and life lend their aid.

The great problem of American education, then, is the problem of making better citizens. Even to state this is to perpetrate a platitude, to obtrude the obvious. But the solution of the problem lies in bringing the school into closer relation with life. The studies which have been too far abstracted from human experience must be brought back again into contact with the concrete social experience from which they sprung. The highest ideals of co-operation, loyalty, sacrifice, which men have wrought out in the past and present must live again in the personalities of the young. Only mature life can see the full development of character, but the socialized school, under the guidance of a high-minded teacher who sees life whole may render invaluable service.

OUR NATIONAL FLORAL EMBLEM.

BY EDNA DEAN PROCTER,
South Farmington, Mass.

If we are to have a national floral emblem let us choose one that is continental and worthy; one that will vividly suggest America whenever its name is heard or its real or pictured form is seen; one whose story is blent with our past and is in accord with our greatness and our destiny.

A national emblem can only be something full of significance to the country it represents. The rose and the lily are dear to England and to France because for centuries in camp and court, in council and fray, they have been an expression of the national life. The shamrock thrills the Irish heart because St. Patrick, when preaching to the chiefs and their clans, plucked a plant growing beside him and illustrated by its trifoliate leaves the mysterious doctrine of the Trinity. Scotland honors the thistle because it pricked the foot of one of the Danish invaders stealing upon the army at night, and his cry roused the camp and the enemy was overcome. We all love the trailing arbutus, the columbine, the golden rod, but to choose one of these, or any other flower, as a national emblem, simply for its beauty of color, or for some fancied meaning in its form, is as incongruous and unworthy as it would be to select some pleasing song and say: "This shall be our national hymn." National hymns are not made thus! They are born of stress and passionate devotion, and consecrated in the nation's hours of grief and of joy. So a national floral emblem is not a thing of unrelated, arbitrary choice. To be truly symbolic it must have been interwoven with the story of the country and the people, and its associations with them must be potent and enduring.

One plant we have, widespread enough and distinguished enough to symbolize our country, and that is our stately Maize—the golden corn. It is wholly and absolutely American. It grows from the lakes to the gulf and from ocean to ocean. It was the grain of the primitive peoples here—the aborig-

inal Americans, and with religious ceremonies of song and dance and prayer they invoked the blessing of their gods upon its planting and its harvest; they buried it with their dead, and offered it to the sun in their temples. It saved the lives of the first European settlers here, and it has been a vast factor in the civilization of the continent. From stalk to blade, from tassel to golden ear, it is singularly beautiful, and it lends itself with grace to varied forms of decoration.

Our eminent historian, John Fiske, says of it, "Maize is more widely and completely identified with the Western hemisphere than any other plant.... In adopting it for the national emblem we do not invent anything out of our fancy, but simply recognize an existing fact. . . It is (I believe) richer in æsthetic suggestiveness than any other that has ever served as a national emblem." How completely it is identified with our country was shown to a recent traveler among the fiords of Norway. Surprised to see some stalks growing in the garden, she said to the inn-keeper's daughter, "Why do you plant the maize when its grain can never ripen?" "Oh," replied the child, "We plant it to please the Americans! They smile when they see it, and say that in their land it grows like a forest, and the bins are filled with its golden ears before the snows can fall."

Do you say it is "commercial?" It is commercial, royally and greatly commercial, but this is its least claim upon us as a national floral emblem. It is a part of the history of the New World and is invested with the tradition and sentiment and poetry of all the American ages.

Each state will choose its device after its own heart. California will have her poppy, Vermont the red clover, Kansas the golden rod, and so on and on through the long, bright list; but for the broad country how can we fail to choose the unique, distinguished, historic, American plant—the Maize, the Corn?

Abstracts of Papers read before the National Educational Association at the Detroit Meeting

AIMS AND METHODS OF STUDYING LATIN.

BY F. P. MOULTON,

Teacher of Latin in the High School, Hartford, Conn.

Free schools from their very nature are the barometer of the nation's intellectual life. They are not alone the depositories and conservators of knowledge, but they should be the levers of progress and the brakes on wild excess.

In this age of progress and expansion is developed a yearning for the new and the temporary, resulting in fads, which in the schools, conducted by men and women of experience, are entirely inexcusable. Change in methods for the mere sake of change, is just as reprehensible as that stubborn unwillingness to change the old for a new and better way is deplorable.

Ever since Charles Francis Adams delivered that famous speech at Harvard, attacking the results and aims of classical study, opinions in regard to the aims and methods of studying Latin have been divided. Many, catching the new idea, were ready to cast aside everything that was old. As usual, the new converts were ready to magnify all the sins of the past in order to show an entire change of heart. It became the fashion to scoff at grammar and the old fashioned drill. These ideas are all too prevalent. They strike at the very foundation of all higher education. No wonder at the cry of distress by teachers of Latin and higher English all over the land.

Grammar is the interpretation of language, the symbols by which the power of language is revealed. And it is this power of language that we should strive to attain. Do not, then, teach grammar less than formerly, but better. To classify thoughts and group clauses as "cause," "condition," "result," etc., is just as much

science as to classify the phenomena of nature. There is no science of chemistry only as we make it science by the way we learn it. There is more science in Latin taught scientifically than in physics taught unscientifically.

The great advantage in translating Latin is that it compels one to observe the force of grammatical and logical structure, the effect of position and arrangement of words and clauses. Our object is not to speak Latin, nor primarily nor merely to read Latin literature. A person born in ancient Rome, speaking the Latin language from a child, was no wiser than a person born in America, speaking English. The mere substitution of one language for another is not an object of importance educationally. The guides of Europe, speaking several languages, may conduct travelers to the tomb of Virgil, or Dante, or Shakespeare, but how marvelously different is their power of thought and expression from that of Virgil, Dante, and Shakespeare themselves!

It is towards, if not to, the higher education of the forum, of eloquence, of literature, that we try to educate our pupils by the study of Latin.

Thoroughness, drill, education are the aims of classical instruction. Concentration and development are prime factors in the consideration of methods. The first year work, the authors to be read, the order in which they should be taken, and what part Latin composition should have in classical training, and how it may be combined with the regular work of translation, are questions for discussion.

AGRICULTURE AS A SCIENCE FOR THE ELEMENTARY SCHOOLS.

BY JOSEPH CARTER.

Superintendent of City Schools, Champaign, Ill.

Science does not seem likely to take a permanent place in the elementary schools under the name of Nature Study as the term is now understood. Yet nature study is so very valuable, and its results of such high educational and economic worth, that it should be continued. How can this be done? Any science may best be taken up on the side nearest the experience of the pupil. No other subject is so near the experience of so many children as agriculture. Agriculture has at its foundations very many of the sciences. It deals with nature—living nature. It is a subject about which all lines of nature study are easily correlated.

The teacher might begin with a window garden and teach the germination of seeds, the development of plants, the effect of sunlight on them, and many other things. Probably eighty per cent of our pupils are in schools where it is possible to have a garden out of doors where not only vegetables, but the larger fruits—apples, plums, pears and the like—could be raised. Here could be studied many things that pertain to the growth of plants—the insects that visit them, and what insects are beneficial and what are injurious, and also how to destroy the injurious ones. The life history of these insects can be studied. This garden can be made a laboratory where most delightful experiments can be made, and where knowledge can be gained at first hand.

Here the soil can be studied. Its origin and nature can be discovered—its evolution from a fiery rock to the fertile food for plants. The birds will visit this garden and they, too, can be studied.

Agriculture is a science whose study takes people out of doors. There is a growing tendency in our schools to adopt the sedentary life of the literary man. Too much we are leading the children to think that wisdom is found only at the desk of the literary fellow. Too many children there are whose school training is mainly an effort to give them the ability to apprehend what was in the mind of the author of some so-called literary masterpiece. We work laboriously to teach them to say: "I think thy thoughts after thee, O DeQuincy," instead of leading them where they joyously can say, "I think Thy thoughts after Thee, O God."

The average child comes to school all saturated with nature—all alive to its every change, and eager for its wonderful and delightful story. Instead of teaching him along the lines of his experience, we turn him in the direction of literature and myth and fairy mysticism, thereby nullifying all the apperceptive capital he has previously accumulated. We do not object to this literary matter *in toto*, but we do object to its being the total of his training, and we think the teaching of agriculture offers a satisfactory supplement to it.

A PLEA FOR THE STUDY OF EDUCATIONAL PHILOSOPHY ON THE PART OF SCIENCE TEACHERS.

BY N. A. HARVEY,

Chicago Normal School, President of the Science Department, N. E. A.

Educational philosophy has a particular problem to solve. It seeks to determine first of all the laws of thought. It is a necessary assumption of all our attempts at education that within certain limits human minds act alike. Educational philosophy seeks to determine the

way in which the mind grows, what is the aim of educational efforts, and to determine the content of each subject, or what there is in it that can be used to greatest advantage for the purpose of education.

If there has been one advance in educa-

tional truth better demonstrated than any other, it is that in schools for general education the knowledge of the facts required is not the chief value to be derived from a particular study. Just as the benefit derived from the study of algebra is not to be looked for in the answers to the problems that the student so laboriously solves, and the value of the study of Latin comes not from the knowledge of the historical facts that the student learns while reading the Latin language, so the value of the study of science does not depend upon the knowledge that the pupil acquires, but upon the power the student acquires while gaining that knowledge.

In our work in zoology we study the structure and life of animals, but if my classes fail to see and to recognize the processes by which the general concept of a group is formed; if they fail to discriminate and compare; if they do not get into the habit of analyzing a specimen before them and of examining it part by part; if they do not learn what is involved in a logical definition; and more than this, if they do not carry this habit of mind into every subject in school, I feel that my work has been a failure, no matter how many animals they have studied, or how neat their notebooks, and

how artistic their drawings. The results obtained from the pursuit of scientific subjects under the influence of such a conception as this are likely to be very different from what they would be if it were believed that the knowledge of a few animal forms or a few experiments in physics were the purpose of scientific study. The teacher must look beyond the mere facts of the subject to the true content that furnishes the reason for its introduction into the curriculum.

The day has gone by when the knowledge of the facts of a subject is considered a sufficient preparation for teaching it. How much knowledge of mathematics, higher and lower, is necessary to make a good teacher of fourth grade arithmetic? How much knowledge of language and literature would guarantee success in teaching third grade reading? How many university graduates would undertake a position in the grades of a city school with assurances of success? It is only a tempting of Providence that permits persons, too poorly prepared to do grade work, to teach in a high school. The application of pedagogical principles is as necessary in high school work as it is in other grades, and university methods and models are not always capable of universal application.

CAUSE AND CURE OF ART UNRESPONSIVENESS.

BY PROFESSOR CHARLES DE GARMO,

Cornell University.

The greatest cause of art unresponsiveness in children lies first, in a false conception of its function, and, second, in irrational methods of teaching; it is the lack of powerful art motives with which to appeal to the young. The common idea that art is an end in itself, a notion derived from specialists in art, is most detrimental to true progress, for it removes art from all the activities of men in their attempts to meet the requisites for survival.

These autotelic notions of art wholly ignore its origins and its growth; they take a cross-section of the latest stage in a development, and make that the chief means for appealing to children. It shows that, while in most human and nat-

ural sciences the potency of evolution is everywhere recognized, in the domain of art instruction it is practically ignored. Teachers, misled by sentimentalists in art, try to secure appreciation in children by feeding their minds on madonnas, and other forms of romantic art; or they attempt the same things by emphasizing the artistic representations of other archaic ideals. All this tends to create sentimentality for art in the susceptible, and indifference of youthful disgust in the prosaic-minded.

Instruction should take account of the origin and development of aesthetic ideals and feelings. It should be governed by the laws of evolution, both in subject and child.

Art has many origins, chief among which are play, war, love, and the harmonious grouping of the elements of economic goods. The latter is seen in such groupings among primitive people in their articles of dress, their implements of war, their crude dwelling places. The enhanced utility of such groupings, and the aesthetic pleasure derived from them, account in good measure for aesthetic enjoyment. Since the young recapitulate in some sense the development of the race, and since, moreover, like all people, old or young, primitive or modern, they take the most intense interest in that which relates most closely to life and the requisites for survival, art instruction

should be industrial before it is fine; the economic in art should precede the autotelic.

Art instruction should not be confined to drawing, but should include also painting, moulding, the arrangement and utilization of materials pertaining to clothing, adornment and household. Art instruction related to animal life should be expressive of animal emotion, the animal being representative in varying states of fear, anger, repose.

When a foundation for artistic sense has been well laid by securing vividness in motive, technique and appreciation of spiritualized forms of art will naturally and easily follow.

ECONOMICS IN THE PUBLIC SCHOOLS.

BY PROFESSOR GEORGE GUNTON,
Institute of Social Economics, New York.

Economics is an equally important study with history and is even better as a mental training. History is chiefly a matter of memorizing and while it is important that children should know the great epochs that have passed, it is more important that the masses know what determines wages and what is the effect

of combinations of capital on the welfare of the community. Intelligent citizenship today demands a broader comprehension of the great public questions than was necessary fifty years ago. It is the function of the teacher to give the elementary principles of economics to the children as simply as possible.

EDUCATION FOR THE TRADES.

BY CHARLES F. WARNER,
Springfield, Mass.

The question of education for the trades is a part of the larger question of technical education for which there is an increasing demand in this country. In answer to this demand the tendency has been hitherto to develop the higher departments of technical education, while comparatively little attention has been paid to the question of industrial education of a lower grade. Those closely in touch with the industrial world are demanding that educators should give attention to this important subject. Some attention has already been given to it, but largely through private enterprise. This can never fully meet the need. It is a question of public education, and

while teaching for the trades should never be considered the sole function of the manual training or technical high school, such schools are nevertheless especially well fitted to make a beginning in this important line of educational work—a beginning which may not be called teaching the trades, but teaching for the trades. The development of modern industrial methods has not only caused the decay of the apprentice system, but it has changed the character of the trades themselves, so that we have not all-round trades, but highly specialized departments of the old trades. Artisans, as a rule, learn and practice generally but one of these special trades. It is clearly impossible to carry

on such special instruction in the public schools; but there may be a much greater emphasis placed upon the technical side of the work in manual training schools, to the end that through an elective system that shall allow such specializing as is practicable the higher public schools shall very nearly make up for the loss of the apprentice system, and at the same time furnish the more general education which that system could not give. Modern mechanical principles and operations as

involved in the machine trades, broadly considered, may be thoroughly taught, so that the way for entrance into these trades may be made much shorter and easier for the young mechanic. It should be kept in mind, however, that the manual training or the technical high school cannot specialize in the direction of all the trades. Its duty is to do what it can without losing its high place in a broad and general system of popular education.

EDUCATIONAL EXPANSION.

BY ELMER E. BROWN,
University of California.

The characteristic word of progress during the past year has been expansion. Educational expansion has been the accompaniment of political and industrial expansion.

The great accumulators of wealth have been giving largely to educational institutions. Mr. Carnegie is the most conspicuous example. Gifts for educational purposes during 1900 aggregated about \$23,000,000, and for libraries \$3,000,000 more.

These great benefactions have raised anew the question of liberty of teaching. It is commonly believed that in the Ross case at Stanford University such liberty of teaching was abridged. But it should be remembered in all such cases that a university, like other institutions, must take account of the co-operative usefulness of its members. It is doubtful whether there is any general or serious danger threatening real and reasonable academic freedom. The discussion of scientific temperance instruction has brought forward the question of freedom of teaching in another form.

New educational movements in the

South are closely bound up with political and industrial changes. The negro is making his own contribution to the solution of the problem, and the Tuskegee school has been one of the centers of educational interest during the year.

The movement toward the establishment of Roman Catholic high schools is important.

The organization of American educational systems in Porto Rico and the Philippine islands is now fairly begun. The movement of American teachers toward those islands is one of the best forms of educational expansion.

American education was well represented at the Paris exposition, the exhibit winning more awards than that of any other country except France.

It is evident that education is now called on to play not only a greater part, but a relatively greater part than ever before in the progress of civilization. Its expansion is accompanied with more thorough internal organization, closer co-operation with other agencies, and heightened sense of responsibility.

FEDERAL AND STATE INTEREST IN HIGHER EDUCATION.

BY ROBERT B. FULTON,
Chancellor University of Mississippi.

A review of the development of the state systems of education, including schools of all grades, shows that in most

cases the initiative lay in grants of land made by Congress. Through the stimulus thus given the newer states have

been able to make more rapid progress than the older states, especially in the work of higher education. Through the co-ordination and co-operation of schools of all grades belonging to the state systems there has come about an unprecedented growth of the work of the state universities. The total number of students enrolled in twenty-six state universities located in all parts of the union excepting the North Atlantic states, in 1894 was 14,943 students. The same twenty-six institutions in 1901 show a total enrollment of 29,683 students—an increase of fully 100 per cent in seven years. The reports of the commissioner of education show an increase of about 19 per cent. in the total of students attending all colleges and universities throughout the United States within the same period.

The remarkable growth of the work of the state universities is the natural result of their co-ordination with the public school systems in the several states.

To meet the requirements of the work of these institutions larger means will be needed. A proper co-ordination of the educational work of all the states calls for federal assistance. This should take the form of aid for the more advanced work. Provision should be made in Washington for such graduate work by students from state universities and all the colleges of the country as can not be thoroughly done by these separate institutions.

Congress should give further aid to educational work in the states, and this should best take the form of maintenance of mining or other engineering and technical schools.

FUNCTION OF THE STATE UNIVERSITY.

BY PRESIDENT R. H. JESSE,

University of Missouri.

I. It should be *within*

a. Non-partisan, but patriotic to the state and to the nation. The foundations of these universities are federal land grants. The funds for their maintenance come from their respective commonwealths. Therefore, in the highest and broadest sense, they should be nurseries of patriotism, but they should shun partisan politics as they shun death.

b. Non-sectarian, but religious. Each should maintain one professor at least to lecture upon sacred literature, natural religion and practical morals, and to serve as chaplain of the students. There is no reason why a large state university should not maintain a faculty of theology, without which it is not complete, and which does not belong necessarily to any denomination. It is a part of their function to show that religion and even theology may be non-sectarian.

c. Free as to tuition in all departments, academic and professional. The distinction between academic and professional training is wholly artificial. Free tuition in any department without high standards of admission and graduation is akin to crime.

d. Every inch a university. There is danger that, through eagerness to take in new territory, to swell enrollments, and to provide instruction for special classes, some of these universities may forget that to deserve richly their titles is the highest obligation they owe to the people. The main purpose is to be from center to circumference a great university.

II. *Without*, it should take care of the state and be a buttress of a national university. It has been preached strenuously that the state should care for its university, but scarcely has the idea been broached that the university should care for the state. It is possible to do this in a variety of ways, in material, in social, in political, and in spiritual things. The possibilities in spiritual things have been alluded to above. What can a great seat of learning do for the public good in other directions?

a. Through the college of agriculture or in conjunction with it and other public agencies, it should look after the material welfare of the people. What has been done in this direction shows what may be done for things material by the scientific skill of universities. But what has been

accomplished has been mainly along the paths prescribed by the United States in the Hatch act, establishing agricultural experiment stations. Except under federal leadership our universities have not yet done very much for the material welfare of the people, when one considers the immense possibilities.

b. In collaboration with state boards, bureaus and commissions, the university should look after social and economic conditions—the management of penal, reformatory and eleemosynary institutions and municipal problems and methods of taxation. Revision of state laws, and the history of archaeology of the commonwealth, and the problems of public health are parts of its work.

e. In co-operation with boards of education and superintendents of public in-

struction the university should build up the schools below it, and should sustain an attitude of sympathy and helpfulness to private and denominational college.

Education will not be complete in these United States until we have at Washington a national university with state institutions as its buttresses. Some day our education will conform to our system of government.

In conclusion let me say that the state university, founded by the federal government and supported by a mill tax upon the property of a great commonwealth, with broad outlook and intense devotion to the welfare of the people, can be made the best institution yet devised by the wit of man for the promotion of human progress. University mottoes are sometimes inspiring.

GIVE THE CHILDREN A CHANCE.

BY N. COE STEWART.

Director of Music in the Cleveland Public Schools.

As a rule there is some attempt to teach music in the public schools of the country, especially in the larger towns and cities. But when it is considered that children who go through the schools should be able to sing the musical language at sight, and write their own musical thoughts and music they hear as readily as they speak and write the language of their birth, that they should use their voices intelligently, making beautiful singing tones, making the right quality of tone, and singing with correct phrasing in right key, in perfect tune, proper rhythm, with fine expression and excellent spirit, etc., it will be seen that the music standard is low.

The children are competent and besides doing as above should develop not only a fondness for music and for singing, but because of right study of music should develop broader and better characters and be of more usefulness in the world.

The hindrances are: First, that there is not sufficient appreciation on the part of school authorities, of music's real benefit, hence they do not require the progress to be measured by the same standard as other studies, and musical and moral effect are both very bad in consequence. Second, it is not appreciated that pupils

must grow in music like any organic body grows. There must be first a germ. In right conditions the germ is awakened. It then reaches out for good which it appropriates to its own use, and so proceeds until matured.

In music attention, effort and perseverance are the seed. The teacher is to bring to the pupil's attention in a clear and objective manner the things the pupil is to learn to know and to do. When a thing is understood the pupil tries to do it, but cannot; but if his effort has been of the right sort, Nature will for each effort or practice give a little advancement. Perseverance in this must eventually build up the power to do the thing.

Teachers who understand this work, who themselves are good musical scholars, who sing well, and who know how to teach and to drill scholars, are absolutely essential if good work is to be done.

Now shall the children have all these things, and thus become better than any former generation. They need it; give them a chance.

The condition will soon come about by the law of growth if all parties go to work to bring it about.

GREEK IN SECONDARY SCHOOLS.

BY ISAAC N. JUDSON.

Teacher in the High School, St. Louis, Mo.

Although statistics show that Greek is about holding its own in the secondary schools of the country, still teachers of Greek are liable to feel themselves on the defensive, so constant and bitter are the attacks made on the study. The tendency at the universities, too, seems to be to put Greek among the electives both for admission and graduation. This, however, should not discourage those who believe in the high educational value of Greek, for students who pursue the subject from choice are bound to prove themselves earnest and faithful.

Greek is a very difficult language, and perhaps it is better for such as are not willing to work hard and do not possess by nature some aptitude for linguistic study to leave it alone. It is true that the student should not follow the line of least resistance, but he should certainly pursue such studies as are best adapted to secure his development. It is a difficult question, how far teachers should urge to the study of Greek pupils who are preparing for a college where it is not required; and a still more difficult one, how far they should urge to its pursuit those who do not intend to go to college.

It is not the purpose of this paper to argue the utility of Greek. The testimony to its educational value is overwhelming. Those who wish to see modern languages put into the place of the classics base their arguments on the sup-

posed superior utility of modern languages. Even if school and colleges could impart the power to speak languages—which they cannot do—such an acquisition would not possess a high educational value.

The so-called natural method of teaching languages has proved itself a failure, and when applied to the classics is an absurdity and means simply wasted time. In learning Greek the essential point is the training of the eye, for the object sought is the ability to translate. The reading of the text therefore should be considered of the least importance. The most important points are: a constant drill in forms and syntax, the acquisition of a vocabulary, and that the pupil be trained to see the meaning of a sentence literally, though it may be necessary to recast it into good English. Reading at sight, the formation and derivation of words, and Greek in English are also important points.

The arrangement of a programme for secondary schools is a question of great importance, especially when a considerable number of pupils do not intend to go to college.

In teaching composition is it better to use sentences which illustrate the principles of syntax consecutively, or sentences and connected passages based on the text?

HIGH SCHOOLS AND ATTENDANCE AT COLLEGE.

BY JAMES RUSSELL PARSONS, JR.,

Secretary of the University of the State of New York, Albany, N. Y.

The rapid increase in public high schools throughout the United States is often cited as a most conspicuous fact in education at the close of the nineteenth century. Within the jurisdiction of the University of the state of New York this increase has been specially noteworthy. In

1900 there were 565 public high schools, as compared with 231 in 1890, a growth in ten years of more than 140 per cent. Though, as elsewhere, the old academy frequently becomes the public high school, yet there were 140 academies in 1900, as compared with only 104 in 1890,

an actual growth in ten years of more than thirty-four per cent, due largely to the incorporation of the parochial schools. In the state of New York during the past decade, while the growth in enrollment in the common high schools has been only 16 per cent, the number of high school students and the total net property of secondary schools have more than doubled. At least 25 per cent of all high school students now complete balanced four year courses, and rapidly increasing numbers remain in the secondary schools for graduate work.

This is the record in New York where academies were placed under the regents of the university in 1784, and high schools by the original union free school act of 1853. But even this growth is not more remarkable than the correspondingly rapid increase under the supervision of the regents of the university in higher, including professional and technical, education. In such institutions as in the public high schools the students and the total net property have doubled during the past decade. The growth in public

high schools is not surprising in view of the popularity of these democratic institutions, and of the fact that advancing requirements for professional and other degrees, now more uniformly high in New York than in any other political division of the United States, force students into the high schools to gain the preliminary education necessary for admission to college. Ten years ago many institutions of higher education in New York received students without any preliminary education worth mentioning which today demand four years or even more of satisfactory high school work or an equivalent. It is remarkable that under such conditions the growth in higher education has been so great. If we except medicine, where the normal growth has been checked temporarily by high standards, and some of the smaller colleges, which as private institutions like the old academies suffer in competition with the public schools, the growth is very great throughout the entire field of higher education.

HOW EARLY MAY HANDWORK BE MADE A PART OF SCHOOL WORK.

BY CHARLES R. RICHARDS,

Teachers' College, Columbia University.

Every consideration of child nature points to the immense significance of handwork as a feature of instruction from the very beginning of school life. The real question is not how early should handwork be introduced in the school, but how late should it be extended.

With the child of the early primary grades, handwork is one of the natural channels through which the inner thought and feeling find expression. Child life, like all life, finds realization in outward manifestation and action, but in the early years this expression of the self naturally tends towards forms that are tangible and concrete—toward forms that are easily comprehended and easily achieved. Such material creations not only constitute a natural fulfillment of the inner life, but they are, in the early stages of growth, one of the principal avenues

through which the mind is receiving ideas and developing capacities.

Such natural expression through handwork cannot take the form of set courses. It must be a matter of adaptation to the life of each particular school. It must recognize the school and the out-of-school interests. It must be a part of life, and not a formal drill.

Variety of materials and processes are necessary to fully achieve this end. Freedom and flexibility and appropriateness of task are more important than accuracy of form. Great accuracy of result is not truth of expression with the pupil of the early grades.

Handwork in the early years of school must, to a large extent, be a natural expression of the ideas and interests represented by the other school work. Such work finds its first office in the instinct to

reproduce the actual or suggested environment. This natural tendency may take the form of pictured representation, as in a painting or drawing of natural forms, or of constructive representation, which approaches one step nearer the reality, as in the making of tools, implements, and buildings of the life studied.

Along with this tendency is the growing instinct, for reality that must be fed

through opportunities for making things of direct practical use. Here the opportunities will be found mainly in the out-of-school life, in making simple things that have a place in the home or in play.

In this latter work care must be taken to reach the interests and conditions of the particular child dealt with, rather than the interests of an ideal child embodied in the imagination of the teacher.

IDEALS AND METHODS OF ECONOMIC TEACHING.

BY, PROFESSOR FREDERICK W. SPIERS,
N. E. Manual Training School, Philadelphia.

Professor Spiers called attention to the need of economic training for the great mass of citizens and that its chief ideal was the training of men and women to think straight and to vote right upon the economic propositions which are an ever increasing proportion of the political issues in modern democracy.

Regarding what economic studies should be taught to pupils in the high schools, he said: "Certain fundamental social laws are as well established as any proposition in geometry, and it is within the pale of established economic truth that the secondary school must work, although the student may properly be allowed an occasional glance into the arena

wherein opposing theories are struggling for recognition."

The highest skill is demanded of the instructor of economics. "The greatest danger of elementary instruction on this subject lies in the fact that the student may absorb the half truths of the textbook as social axioms and go out into practical life to make application of his rules which would make their author shudder. The student of economics must be taught that the principles he learns are to be applied with discretion to the varied conditions he will meet." Ideal teachers of economics are far from common. "If a specially trained, thoroughly equipped teacher cannot be obtained, omit the subject from the curriculum."

MANUAL TRAINING IN THE HIGH SCHOOL.

BY GILBERT B. MORRISON,
Principal Manual Training High School, Kansas City, Mo.

Manual training is taking its place as a part of the high school curriculum for three reasons: 1. It satisfies the popular demand that our schools should supply the needs of practical life. 2. It broadens and strengthens the pupil's activities in such a way that he can do more and better academic work. 3. It reaches a much larger proportion of parents and pupils, causing an increased attendance and thereby actually decreasing the expense per capita. These three reasons are embodied in the words expediency, culture and economy.

It has been amply demonstrated that a properly correlated course of manual training does not diminish but actually increases the amount of academic work a pupil can accomplish during his high school course.

Manual training is now passing through the same experience that the working laboratory method of teaching science passed twenty years ago. It had to be forced into the course by a few enthusiasts and to fight its way to recognition as an educational norm. Manual training is now doing the same thing. Its educa-

tional value does not consist alone in the mere act of doing, *per se*, but in the relation it bears to mental and moral activities. Manual training helps to keep our schools in touch with the spirit of a progressive age.

The two types of high schools—the manual training and the classical—is the result of the transition through which our schools are now passing. The result will be sooner or later the amalgamation of the two types into one which will be normal to the present age. This normal type is already nearly reached in those so-called manual training high schools in which all the ordinary high school branches are incorporated with industrial art and the mechanic arts. The narrow apprentice school and the narrow classical school will get together and a modern high school will result. The rough mechanic and the pale faced classicist need each other's influence. In a country like ours, rich in industrial possibilities and imperative in its manual and artistic requirements, our youth should be attracted to them by the proper high school influence.

The opponents of manual training at

first used the "culture" argument. They are now shifting their ground to the "expense" argument. This argument like the other must "stand examination." An expenditure of public money is economical to the extent that it can be utilized by the taxpayers. A school which is not attended by the average boy is an expensive school. A school which is attended by the average boy is an economical school. His father is getting something for his money.

A loaf of bread costing five cents, which feeds one man, is more expensive than a loaf costing six cents, which feeds two men. Where manual training has been properly introduced the high school enrollment has been doubled. While the actual expense has been somewhat increased the per-capita expense has actually diminished. The complaint of taxpayers that high schools are too expensive, must be met by making the schools so good and so evidently useful that they will be regarded as necessities. The average tax-payer will vote six mills for an evident necessity when he would refuse to vote four mills for something whose utility he cannot see.

MANUAL TRAINING IN RELATION TO TRADE SCHOOLS.

BY SUPERINTENDENT VIRGIL G. CURTIS,

Toledo Polytechnic School, Toledo, O.

This age is pre-eminently industrial, but America has been so absorbed with agricultural pursuits, commercial enterprises and the delving for minerals and oils that it has not seen the advantages of technical training. The progress of our natural facilities will in time bring us to the stage when we shall become a nation of manufacturers.

The chief aim of all progressive nations is the improvement of industries by bringing up skilled workmen and

placing them in the departments of trade. Why should we pay tribute to foreign countries when we have an army of boys and girls who, if well trained, would make skilled workmen and build up our great seats of industry and place us in the front ranks of the manufacturers of the world? Our people are hardy and intelligent and the time is at hand when we should substitute industry for idleness and skill for ignorance.

NECESSARY ELEMENTS IN WORK AND PLAY AND PRACTICAL CONSEQUENCES.

BY C. GERALDINE O'GRADY.
Teachers' College, New York.

Activity: co-operation, to some extent; progression, and rhythm, orderly alternation of activity, seem to be necessary elements in all wholesome work and play. Rhythm is the special point we shall discuss at present. It is observable in so many physical and natural conditions of the world around us and is so much a part of our make-up, that it must be considered in all activity, whether of work or play. Some of it we cannot escape from; but in other cases it is a variable quantity. Variation and spontaneous impulse are also necessary elements in educative work or play, and the make-up of children differs so much on account of mixed heredity and varying nutrition, environment, etc., that allowance for individual growth and differing needs must

prevent our planning too many stereotyped forms of rhythmic exercise for young children. Early childhood is especially the time of trial, experiment and gradual selection in all activity and growth in co-ordination; but to allow for this, activities must not become stereotyped too soon. Many teachers are giving too definite and complex form of rhythmic exercise to the children. There is danger in the blind enthusiasm and energy with which young teachers seize a new idea and lose sight of all others for the time. We need balance and sanity in this as in other things. Some mention of experiments with rhythm and their results observed with children concluded the paper.

PROGRESS IN EDUCATION.

BY BISHOP JOHN L. SPAULDING,
Peoria, Illinois.

Bishop Spaulding sketched the great epochs in the progress of education from the time of the Romans up to the present. He then said, in part: "At the opening of the nineteenth century there is an enthusiasm such as never before existed. Education being a process of conscious evolution, those who assist and guide it must themselves continue to grow. The work accomplished in the United States during the last fifty years in the organization of a great system of schools was never before equaled in the history of any other people. In our white native people at present illiteracy has almost ceased to exist. Our progress in higher education has been even more rapid. The number of colleges has more than doubled in the last quarter of a century, while the standards for admission into almost all of them have been raised. Original investigation along scientific lines has been intro-

duced and developed to a wonderful extent. In scientific and technical education, in agricultural and industrial education, we are making genuine and rapid progress. The bishop said that the normal schools of the country had rendered important service in the past, but that their training alone is insufficient, as teachers should have more than mere professional skill. "The more comprehensive our grasp of the power and meaning of teaching becomes, the easier it shall be to persuade the best men and women to devote themselves to teaching, for we shall make them feel that the teacher does not take up a trade, but the highest art. Education is the furtherance of life, and instruction is education only when the knowledge acquired gives truer ideas of the worth of life and supplies motives for right living."

PHYSIOGRAPHY,

BY W. H. SNYDER,
Worcester, Mass.

We Americans of all nations should be students of geography. Our isolation, extent of territory, commercial and expansive spirit make it expedient that we should acquaint ourselves in all ways possible with the rest of the world. Although the American is by nature a traveler, yet our home geography extends over such vast distances, and the oceans so effectually shut off our shoulder to shoulder intercourse with other nations, that it is only through study that the most of us will ever be brought to appreciate the conditions of other peoples. These conditions must be appreciated if we are ever to wisely take the position for which we as a nation seem foreordained. This appreciation will, however, never be attained by a purposeless or aimless study.

Then, too, if ever geography is to attain a commanding position in our educational system, it must show its value as a disciplinary as well as an informational subject. The simple acquiring of information does not train citizens. The why and the because must play as important a part as the behold and the remember. Probably most of us can remember when physics and chemistry were taught entirely from books, and consisted simply of a mass of information which was accepted on authority. During the past few years this kind of presentation has been superseded by a rational method and, I believe, we are destined to see in the near future the same rational method applied to geography. To attain its highest efficiency, geography must become to a considerable extent a labora-

tory subject, in which actual work is done, and the principal use of the textbook is as a guide and fount of reference, and not as something to be learned and recited.

The government during recent years has gone to great expense in making contour maps of different parts of the country. How many of our educated people even are able to intelligently use these? What does great circle sailing mean to the average student of geography?

The aim in geography should be to impart a scientific knowledge of the surface of the earth. This scientific knowledge, however, is not general information. It is the experimental knowledge which enables us to understand exactly what sort of topography is represented by a contour map, to form a mental picture of a region when properly described, and by means of photographs, maps, and description to be able to appreciate and explain the phenomena discovered. It is necessary, therefore, to have a material equipment for the teaching of geography. There must be an actuality about the subject, not a mere hearsay. Chicago by its school museum, which it has prepared to move from school to school, is the first city to supply one of these needs. The larger part of the apparatus for this subject has not yet been invented, and it devolves upon those who are today teaching the science to construct and bring together the tools. The first decade of the twentieth century will see this done.

SOME OF OUR MISTAKES.

BY PRIN. GEORGE M. GRANT.
Queen's University, Kingston, Ont.

1. We have undervalued the teaching profession. All history shows how great is this mistake, for teachers have determined every permanent advance of the thought and life of humanity. Aristotle, Plato, Socrates and the Greek dramat-

ists were the teachers of their time, and Europe and America still sit at their feet. So in the east with Guatama and Confucius. Jesus was known simply as rabbi or teacher. What was the characteristic of those great teachers? That they

spoke with authority, because they had mastered what they taught.

2. We have fancied that there is a royal road to knowledge, and so we have encouraged intellectual levity and trifling in our children. There is no such road. If we would know any subject, we must work. But if strong drink has slain its thousands, idleness has slain its ten thousands. The mission of the school is to teach the young to subordinate pleasure to duty. Interest by inspiring, not by amusing them.

3. We have fancied that there is a royal road to the making of teachers, and so have tried short cuts. The study

of psychology is good for graduate students, but useless for average teachers. It deals with abstractions and each pupil is a concrete being.

These mistakes are rooted in low ideals of life. How shall we correct them? Give such inducements to the best men to enter and remain in the profession as they give in England. Honor teachers by a right attitude to them in the home, as in Scotland and Germany. And as the attitude of the teacher determines in the long run the attitude of the public to learning, let him show that he regards it as an end and not merely a means to a material end.

SOME RESULTS OF HEARING: TESTS OF CHICAGO SCHOOL CHILDREN.

BY DR. D. P. MCMILLAN,

Department of Child Study, Chicago Public Schools.

Despite the advent of the book era it still remains true that wherever instruction is imparted, the unimpaired use of the sense of hearing is an almost indispensable necessity. This means that an examination should be made of the sense of hearing of each child in school for the detection of possible defects. A careful examination of between twelve and thirteen ears, which is merely one of the sensory tests being carried on by the Child Study Department of the Chicago Public Schools, reveals the startling fact that the audiometer records of the children, a painstaking test for each individual, shows that sixteen per cent of Chicago school children have defective hearing in at least one ear, and are greatly inconvenienced unless they receive individual attention. Further, between six and seven per cent of the total number have both ears defective. Nine and a half per cent have either the right or left ear defective and so are liable to be seriously handicapped unless care is taken in so seating them that they can use the good ear to advantage.

Throughout public school life, from six to eighteen years, the largest number of hearing defects are found about the age of eight. This may be due in a large measure to the increased exposure inci-

dent upon school life, inducing catarrhal and other affections and marks the inability of the organism to readily adapt itself to the new conditions. The years of early adolescence, about the age of twelve and a half to thirteen and a half, being the years of accelerated growth and development, are the years in which the smallest number of ear defects are found. Only thirteen and a half per cent of the number found at this age showing distinct defects. A partial cause of this may be due to the weeding out process of the more defective children in the last years of the grammar grades, but more probably the increased health and growth of this period, with the decided enlargement of the middle zone of the face involving increased growth and tonicity of the Eustachian tube, has more to do with this marked improvement.

At every stage of school life, the backward pupils of the Chicago schools, that is, those who for some reason are not in the proper grades, are found with a greater number of defective ears than the bright children, i. e., the group composed of those at and above grade.

Besides delimiting the field of sense impression, defective hearing may be an indication of lack of growth, improper growth, of injury or of diseased condi-





tion of the child. This means that defective hearing parallels other defects, motor sensory or of growth.

This was strikingly evidenced in the examination made by the department of the 600 boys found in the John Worthy school, i. e., the boys sent by the juvenile court to the city prison.

Further, in marking defects of growth and movement the department has made

note of defects of speech. This is a general term on the child's card used to cover such palpable defects as lisping, stammering, hesitation and imperfect pronunciation of all vocal sounds. It is found that sixty-one per cent of those having such defects were markedly defective in hearing. This may be accounted for in many cases by the same reason that the congenitally deaf child is a mute.

THE LESSONS TO BE LEARNED BY THE TEACHER OF NORMAL PUPILS FROM EXPERIENCE IN TEACHING ARITHMETIC TO THE BLIND.

BY FRANK H. HALL,

Superintendent of State School for the Blind, Jacksonville, Ill.

There are five reasons why the blind student often excels in arithmetic.

1. The blind child images groups of objects and magnitudes that come to him through the senses more easily and more perfectly than the child with sight.

2. The blind child acquires unusual skill in using the memory images in his possession in the construction of new mental material and in discerning other numerical relations.

3. The blind child's "ear-mindedness" helps to perfect him in imaging when symbols are presented to his senses; hence to aid him in seeing through mathematical symbols to that for which they stand.

4. The blind child's defect forces him to think in numbers rather than in figures. So his arithmetic becomes an affair of the head rather than of the hand.

5. The blind child's defect forces the teacher to make the transition from ear-symbols to touch-symbols less abrupt than is the transition in the common schools from ear-symbols to eye-symbols.

If the assumption that the blind child often excels his seeing companions in

number work is warranted by the facts, and if the five reasons given account for this difference in the blind child's favor, then the lessons for the teacher of normal pupils are so plain that he who runs may read.

The teacher of such pupils should train the child (1) in recalling memory images of groups of objects and of various magnitudes; (2) in constructing new images of magnitude out of his memory images; (3) in listening to arithmetical language and interpreting it; (4) in doing a much larger amount of the so-called "mental work" and a smaller amount of "slate work" than is usual in the common schools. (5) The teacher must accomplish this mainly through oral instruction. She should use books in the early years for re-viewing—seeing again—that with which the pupil is already familiar.

In conclusion: May we not hope that light may come out of the darkness, and voices out of the silence, and strength out of the feebleness represented in Section XVI., that shall contribute in no small measure to the solution of important educational problems?

THE LIBRARY AND THE SCHOOL AS CO-ORDINATE FORCES IN EDUCATION.

BY LIVINGSTONE MCCARTNEY,

Superintendent of Public Schools, Hopkinsville, Ky.

We have to consider a two-fold question: How can the library be most serv-

iceable to the child in the daily performance of his work in the school; and, how

can the school life of the child be so ordered as to give him the greatest possible command of the contents of good books in his subsequent career?

The library is to serve as an assistant to the school. To do this properly it must contain many hundreds of books that are chosen because of their connection with the subjects upon which the child is working. These books cannot be satisfactorily chosen by librarians alone, neither can the teachers and superintendents of schools select them. All three of these workers for the child must combine in choosing the books that are to be given to him from the library.

When the books have been properly selected and placed on the library shelves, the library and the school must co-operate in so arranging their work and their re-

quirements that the child can get the full benefit of the books under the guidance of his teacher. This is best accomplished by permitting the teacher to draw a large number of books bearing upon the present work of her class, and to retain them for several weeks.

But the school must also recognize the fact that it is expected to prepare the child for the future use and enjoyment of library privileges. Its work must be so adjusted to the library privileges of its city that each pupil can spend much time delving in the books and obtaining a knowledge of them at first hand. The student should gain a complete mastery of a few chosen books and a wide general knowledge of the books that he has not read, and of their authors.

THE MORAL ELEMENT IN EDUCATION.

BY W. H. FAUNCE.

President of Brown University.

Over every true school might well be inscribed the sentence which we find in Genesis: "Let us make man." That great purpose, anterior to creation, lies behind all the work of the teacher. Teaching is a species of creation.

But the fact is, that for the past few centuries we have tried in our schools to produce minds rather than men. We have given our whole strength to mentality, often ignoring the physical basis on the one side, and the entire gamut of desire and volition on the other. Modern psychology makes the will central in human nature. To possess a will active, and active on the side of righteousness, is more than to carry in one's head all tongues, ancient and modern, or to be familiar with all the sciences of the world.

Plato and Aristotle shall rise up in the judgment with the men of this generation and shall condemn it; for they aimed everywhere at the production of moral human beings, and we have aimed at making learning and remembering machines. We begin to perceive that the end of education is volition—(as Kant said, the only good thing in the universe is a good will).

The first requisite is character in the teacher. No formal instruction in moral duties can ever have one-thousandth part of the influence which steadily flows from a teacher by nature magnanimous and steadfast. And as we all look back in life, we see that the best our teachers did for us was to incarnate before our eyes the simple, homely virtues, which are the warp and woof of noble living.

Just because the human personality is a growth and not a manufactured article, this direct approach to its moral life is far more valuable than any didactic pressure. In carving a granite column which lies cold and passive under the chisel, we need the direct blow on blow which shall shatter the surface into the desired shape. But in training a vine or a blossoming shrub, nothing is gained by pulling the branches or untwisting the tendrils, or forcing open the buds. We must approach the plant life by moistening the roots, by bathing the leaves in light, by nourishing the soil, and then letting nature do the rest.

To recur again to our masters, the Greeks, they had no ten commandments to teach to their pupils, their religious

sanctions were feeble compared with ours, and they could not enforce duty by any clear vision of a life to come. Yet their education was so serious and noble, so essentially bound up with moral action, that at the age of 17 or 18, when a young man received the soldier's spear and shield in the presence of the magistrates, he took the memorable oath of the Ephebi:

"I will not dishonor my sacred arms; I will not desert my fellow soldier by whose side I shall be set; I will do battle for my religion and my country whether aided or unaided. I will leave my country not less, but greater and more powerful than she is when committed to me; I will reverently obey the citizens who shall act as judges; I will obey the ordinances which have been established by the national will; and whosoever would destroy those ordinances, I will not suffer him, and I will do battle for them whether aided or unaided; and I will honor the temple where my fathers worshiped; of these things the gods are my witnesses." Can the average American youth take that oath and keep it? And if he cannot, is it not irrelevant, if not impertinent, for him to offer as a substitute, a certain amount of Greek, Latin, and mathematics? When pursued in legitimate ways, modern athletic contests not only develop the physical powers, as do gymnastics, but they develop certain moral qualities which exclusive attention to mental development has led us to ignore. The spirit of fairness in competition developed in sport may be easily transferred to the industrial arena. The willingness to face heavy odds on the gridiron may be carried into the field of battle. The spirit of generosity to a defeated opponent and of faith in a defeated friend is the very instinct of chivalry, and without it life will become like nature, "red in tooth and claw."

Some teachers who readily admit the moral effect of administration and of student sport have never yet fully recog-

nized the power of moral methods in the class-room. It was said of Gibbon, perhaps unjustly, that he wrote in a style in which it was impossible to tell the truth. Any one who compares Macaulay's glittering sentences with his style in correspondence or conversation will see how far he was willing to sacrifice truth to epigram. The influence of the scientific spirit on literary and especially on oratorical style has been profound. The orations of Webster are too ponderous for our day, and the delight of Everett in mere rhetorical splendor is wearisome to a generation which is eager for the fact and distrustful of verbal drapery. College writing ought to feel the changed temper of our time and cultivate the virtues of simplicity, directness and truth.

As flowers come before botany, and stars before astronomy, moral living comes before moral philosophy. Yet inevitably the student will come to ask as to the reason of righteousness and will need direct ethical teaching. The theory of ethics is still in debate among philosophers, but the *praxis*, the actual life according to practical reason, is something which may be taught by Christian, Jew or agnostic, and may be taught in the same way by all of them. There can be no valid objection to the use of brief treatises on moral conduct which shall formulate principles and enforce them by actual consequences of conduct as seen in society and history. That righteousness tendeth to life, and that the wages of sin is death, is not, and never can be, sectarian instruction. It is simply a statement of moral gravitation as universal, as pitiless, and quite as important for us to appreciate as the law of physical gravitation. A text-book on this subject must describe the virtues which are essential to human beings dwelling together, must show them in the great characters of history, and re-enforce them by their results in the social organism.

THE RELATION OF GEOGRAPHY TO OTHER SCIENCE SUBJECTS.

BY PROFESSOR WILLIAM HARMON NORTON,
Cornell College, Iowa.

This paper presented the questions at issue from the viewpoint of the geologist. Physical geography is not physiography as that term is understood in England, nor is it general as distinct from regional geography. It is restricted to physical as opposed to biologic phenomena. Of its subdivisions, geography of the planet and of the sea were passed with brief mention. Under the geography of the air a plea was made for meteorology as an independent study on account of its disciplinary value. The geography of the land is the pith of physical geography, and the large or exclusive place it is given in recent text books was shown by quotations from Davis, Penck, Lapparent, Boulangier and Supan. Land-forms is the overlapland between geology and geography. It was explored by geologists and both in instruction and research they remain in possession of the field. They cannot be shut out from the study of the earth as it now is by the claim that this is the exclusive right of geography. A plea was therefore made for the teach-

ing of land forms under geology as the study which possesses the greater coherence, the easier approach, the better presentation, and the wider view. Geology sets the content which it shares with physical geography in proper perspective.

In the teaching of geography larger space should be given to man and his work, but this extension cannot be brought about by discussion, criticism, and the writing of text books. It awaits the masters who will do for the sciences relating to man what geologists are doing for geomorphology.

With a more thorough treatment of physical geography introducing "advanced regional geography," with the latter given the place it holds in German schools, and with meteorology and geology taught as concluding studies, the earth sciences may form a line of continuous study so closely articulated that it may well be considered the vertebral column of scientific secondary instruction.

THE RELATION OF MUSIC TO LIFE.

BY THOMAS WHITNEY SURETTE.

It is a commonplace criticism to say that art is related to life. We all know, for instance, that the rise of the art of landscape painting did not begin—could not begin—until men had learned to love nature and study her as she is. That in an age devoted to religious work and religious thoughts, when life was merely a preparation for getting safely into the other world, painting must of necessity devote itself to the representation of those ideas. They crowded men's thoughts and men painted what they thought most about.

The relation of music to life is equally close, if not as easily perceived. I shall take to illustrate this relationship, three periods when three distinct modes of life and kinds of intelligence were common. First, the time we call the old regime, when powdered wigs, short clothes, and the formalities reigned supreme; second, the time when the republican idea was beginning to assert itself (at the beginning of the nineteenth century); and third, our own time, with its mechanical and industrial supremacy.

I have selected three typical composi-

tions to illustrate what I want to show; namely, the slow movement out of Haydn's Trio in G, the first two movements out of Beethoven's Trio in B Flat, Op. 98; and the slow movement out of Brahms's Violin Sonata in G.

Each of these listened to by an open intelligence, has salient signs both outward and inward, of the times which produced it.

In the first, elegant turns in the melody; perfect clearness in the harmony; bowings and scrapings at all the pauses, and a general sing-song perfection, like a well-tuned verse of one of the older poets. Beethoven's piece, on the contrary, has the challenge in it which man was learning to make to fate. It rumbles with the prophecy of what was to come; while in Brahms's the complexity of modern thought, the striving for inward rather than outward beauty, finds a wondrous utterance.

Beyond these things, which are patent to any careful observer, there is, of course, the much more important consideration—what is the use of music in the scheme of life. The indefiniteness of its utterance prevents its teaching us the same lessons we may learn from the other arts, but it goes beyond them in this; emotion, feeling, the passion, the intelligence of any time or any people speak through it unhampered; instead of being open to Voltaire's slur that, "What was too silly to be said was sung," it catches feeling and thought at the point where words have to cease, and carries them on to their very highest potency. In the end it will be found that Carlyle was right when he said, "See deeply enough and you see musically," and that the idea of the old writers about the harmony of the spheres was something more than euphony.

THE SCHOOL AND THE LIBRARY; THE VALUE OF LITERATURE IN EARLY EDUCATION.

BY FREDERICK M. CRUNDEN,

Librarian of the St. Louis Public Library.

The speaker began by referring to the recent progress of co-operation between school and library, and the growth among educators of the conviction that literature is an essential factor in early education. Among striking quotations given in support of his thesis was one from a school principal, who would take a boy of fourteen, whose mind from earliest years had been fed on good literature—but who had never had an hour's instruction in arithmetic—and would guarantee to teach him in six weeks all the arithmetic he need ever know, and as much as he would learn in six years at school.

Mr. Crunden gave an account of the co-operative work done in St. Louis by the public library and the public schools by means of traveling libraries and collections deposited in the schools. To show the value of this work, he quoted from reports made by teachers. The

general tenor of these was that "the literature furnished by the public library is of incalculable value to the pupils;" that "it has been helpful in all their studies;" that "it gives the pupil greater interest in his regular work;" and that "it is very helpful in discipline—lessening, indeed, the need for discipline." They all testify that the children who read most books are best in their studies.

One principal says: "Supplementary reading is a misnomer: in my school it is *the whole thing*." And another sums up by saying: "Supplementary reading, especially in the lower grades, is worth all the rest of the school work."

The speaker discussed the question, What is education? He plead for the child's right to joyous activity. Pleasure is an essential element in child life; and there is nothing that combines in so high a degree pleasure and profit as a good book.

THE TEACHER AS A SOCIAL-ECONOMIC POWER.

BY REUBEN POST HALLECK,
Principal Boys' High School, Louisville, Ky.

The teacher who is anti-social commits a crime if he does not immediately follow some other vocation. Those vested with authority in the educational field, whether boards of education, superintendents or principals, who try to rule their teachers by the anti-social feeling of fear, are an abomination in this new era, as is the teacher who tries to secure results from pupils by making them afraid. The slave-driver with his lash did not secure for the South the benefits that have come from free and willing labor.

The teacher who would be a social-economic power must learn and apply certain social truths which psychology offers. The most important of these is suggestion, together with imitation, its corollary. An understanding of the basal elements of sympathy is also necessary. Psychology teaches us to dislodge an idea of wrong-doing, not by a "don't" idea, but by a "do" idea.

The social element must be felt in the studies of the curriculum. Even a study as barren as English composition becomes a pleasurable pursuit when it is carried on in the form of letters between pupils of different schools. I shall never forget the thrill of pleasure among my pupils when the first letter was received at my school from an English schoolboy, or the eagerness with which it was answered. I hope to see an organized exchange of letters between the pupils of distant schools in this country and Canada and England. Each pupil will feel that his correspondent is his guest. This way of teaching composition makes the pupil a social being; it gives him eyes and ears

and sympathy and makes him appreciate the common things of life.

Children must be taught to devise original problems as well as to solve ready-made ones. A German and an American engineer started with a large railroad system. The German could solve the toughest ready-made problems brought to him, but he could set no original ones. He remained stationary while the American advanced rapidly, for he could devise improvements and bring in problems for the German to solve.

Finally, we may say that when a teacher has mastered the law of suggestion on its social side, when he has brought into play the intelligent imitation of the best, when he has developed the potential capacity for sympathy, when he has influenced children to do things for others, when he has ceased to tell them that education consists in knowing where to look for facts and has taught them to set problems of their own to solve, when he has impressed on them that wealth depends not so much on mere saving as on the use made of that saving, when he has made them understand that intellectual, moral, and social culture come in larger measure, not so much in learning by rote other people's knowledge in those branches, as in drawing knowledge from the living well of experience, when he has taught them to have increasing wants, the result of high ideals—then and only then does the teacher become the needed social-economic power and raise to a higher plane the world with which he comes in contact. There will come to this republic loss of Eden unless greater teachers on the social side restore us.

THE TEACHING OF ENGLISH.

BY JAMES H. HARRIS,
Orchard Lake, Mich.

A retrospect of the course in English during the past ten or fifteen years reveals a progress that is as revolutionary

as it is encouraging. 'Tis a far throw from the narrow, scanty, circumscribed character of the work in English as it ex-

isted ten years ago in our secondary schools to the broad, rich, generous, and vitalizing curriculum which we see to-day. Its growth has been a strictly organic one, and has followed with striking and scrupulous fidelity the general laws of organic development. From a state of almost pure potentiality we have seen it emerge into a separate and distinctive entity, gradually but steadily dissociating itself from the other subjects, and slowly but irresistibly gaining recognition for itself and for its right to a place in the hierarchy of studies.

Evidences of an undeniable growth in both the social and educational interest in the subject of English are found, (1) in the enlarged amount of work required of the pupils, (2) in the improved and more scientific character of the teaching, (3) in the increased amount of time devoted to the subject, (4) in the evolution of a distinct class in the educational world whose work is the performance of this function, (5) in the large number of text-

books constantly appearing, and (6) in current literature on the subject.

The ground for this extraordinary interest and activity in this subject lies in two cases: First, a dynamic appreciation of the cultural and disciplinary possibilities of a study of the masterpieces of English literature, and, second, a keener and more lively sense of the value of our native tongue as an instrument of social communication. Cultivation of the art of expression, as a social obligation, has only recently appealed to us, but in it, philosophically speaking, lies, whether consciously or unconsciously, the impelling cause of the interest and progress in English.

The present status of the English problem is distinctly encouraging. On the main principles of our work—its character and aim—we are in substantial unanimity. Such differences as exist are almost exclusively upon matters of detail, and will gradually adjust themselves to the more intelligently conceived wants of the social organism.

THE TEXTILE ARTS AS CONSTRUCTIVE WORK.

BY CLARA ISABEL MITCHELL,

Chicago, Ill.

The important question now under discussion is the place of constructive work in the curriculum.

Teachers of manual training, constructive work, industrial art, or drawing, should take the ground that this work is fundamental and should be the center of correlation of the course of study.

The new ideal in education is community life. Community life is made of work and play. The forms of work and play which are the school life, must be such as go to build and sustain community life, and as such they are social activities. All constructive work in school, being social occupation, is the center of social life and interest, and hence should be the center of the course of study. Being the creative force in community life, it leads out

into all fields of human knowledge and draws to itself all that concerns human life. Knowledge gotten through social activity is larger and of more value than that gained under any other ideal; first, because it is related and organized as it is gotten; second, because it is put to immediate use.

A practical course of study could be planned by making such occupations as wood-working, and metal-working, textile arts, modeling, pottery, cooking, house-keeping, gardening, printing, drawing, painting, and school government the center of the course of study. Science, geography and history should be grouped around these, mathematics growing out of science, literature and language out of history.

VALUE OF TRUANT SCHOOLS.

BY MRS. DWIGHT GOSS,

Grand Rapids, Mich.

Truant schools become necessary because grades and teachers are imperfect. In cities truancy is a sociological problem. Truants come largely from neighborhoods of poverty and immorality, but a truant is not a criminal.

The principal causes of truancy are physical and mental defects in children, bad home influence, bad management in school, cigarettes, and a desire on the part of boys to be men. Defective children are often required by ignorant teachers to do work which they are incapable of doing. Children with physical defects, weak memories, hallucinations, and bad tempers need special care. Bad home influences make truants. Many parents are ignorant and indifferent, while others are criminal, yet their children need school training more than all others. Sometimes boys are driven to truancy by poor management on the part of teachers. The cigarette habit causes truancy, and can be met only by teaching boys that it unfits them for games and sports. A few boys become truants to do something in active life; were they understood and rightly managed they would be good students.

Good administration keeps the membership of a truant school small. Preventives for truancy in the grades are a good superintendent, good teachers, pleasant surroundings, and manual work. The superintendent should have sympathy and philanthropic instincts. The principal should be an experienced teacher, with firmness

and sympathy for defective children and evil-disposed boys. Grade teachers must be intelligent enough to apply the right theories of her superiors to the right pupils, or all will suffer. Ample playgrounds have a wholesome effect upon boys inclined to truancy. Manual training brings boys into touch with the industrial world, for which many of them are yearning.

In truant schools, teachers should be employed who have shown special ability in dealing with truants in the grades. Truant schools should have pleasant surroundings, a gymnasium, bath room, and good juvenile literature. Military exercises and games are helpful to truants. Plenty of exercise will counteract and sometimes cure the cigarette habit. A skillful teacher will use the "gang" instinct to organize truants into teams and clubs for play and study. Manual training is an excellent character builder and a great teacher of moral law. The workshop puts before the truant's eyes the evils of waste and false representations. Teachers in truant schools should secure the co-operation of the police and all people doing philanthropic work in the city.

Grand Rapids sends as few as possible from the grades to the city truant school, and as few as possible from the city to the state schools. The parental school system is not in favor. An efficient truant school is a good investment, mentally, morally, and financially.

WHAT CONSTITUTES A BUSINESS EDUCATION.

BY I. O. CRISSY,

State Inspector of Business Education, Regents of the University, Albany, N. Y.

The term business education means, in a broad sense, any and all education that will aid one in business, either in plan-

ning and transacting it, or in recording it when transacted.

Business education, therefore, includes

everything that adds to its possessor's stock of knowledge, stimulates his faculties or increases his thought power. It also includes those things which help to develop the body and the senses. In this broader sense the process of education begins in infancy and ends only with life itself. The agencies for imparting it may be any of the schools, from the kindergarten to the university, or they may not include any of these. We find occasionally an individual—call him prodigy, genius, or what you will—who has obtained his education for business and won what the world calls success without the aid of the schools, and with almost every condition that can be conceived of apparently against him. But let none make the mistake of believing himself such a genius, and therefore able to make his way without the sound and systematic training of the schools.

What constitutes a business education depends very much upon the point of view. From that of the "American business college," which for more than half a century monopolized in this country the visible administration of that education, it implies such training in the recording of business as will enable the student to "obtain a position" as junior bookkeeper or clerk; and this was long the prevailing idea of a business education in America. I speak with no disrespect of the American business college. An institution that has persisted so long, and still enjoys a considerable prosperity must have had real value.

Within the past ten years, following somewhat the example of continental Eu-

rope, there has been established in the United States, largely through the report of Professor James to the American Bankers' Association, a distinct grade of secondary business education, of which the typical exponent is the four-year commercial course, throughout the country.

This course aims not only to train the youth in the most improved methods of recording business transactions, but also to teach him in a broad, general way how business originates and how it is done. Recognizing that "Knowledge is power," it recognizes also that the getting of knowledge by independent investigation and study develops the higher power of thinking. The commercial course becomes, in mind development, the peer of any course in the school and the special training is grounded on a solid foundation of general education. For business education no less than general education the hope of the masses of the people centers in the high school. But for such as are able to go further the colleges and universities of the country are fast opening their doors.

I have sought to show herein that the term, business education, is both elastic and comprehensive; that business education may profitably engage the student for sixteen years of school work, at the completion of which there await him educational honors equal with those obtainable in letters or science. I believe, too, that education pays in dollars and cents, no less than in personal gratification and better citizenship.

WHAT THE NORMAL SCHOOLS CAN DO FOR THE TEACHERS FROM THE LIBRARY SIDE.

BY MISS IRENE WARREN.

Librarian School of Education, University of Chicago.

The normal school, especially through its librarian, can increase perhaps more rapidly than any other institution the intelligent use of books and libraries. Hundreds of teachers leave our normal schools every year, each of whom will have in her charge some dozen to forty

pupils. It is, therefore, of the greatest importance that these student teachers learn to use books and libraries to the best advantage.

Every student recommended by the normal schools as ready for service should have sufficient knowledge of the princi-

ples of library economy to economically organize and administer at least the small libraries to be found in our average school of today.

Every pedagogic student should know the laws of his own state regarding the establishment and maintenance of public libraries and public school libraries. He should also have the opportunity of comparing them with the best of those of other states. There is quite sufficient legislation regarding these matters in a number of our states, but in none is it used to its greatest advantage because the people are ignorant of its possibilities.

The normal school graduate should have had indicated to him some of the many co-operative agencies possible in his school work. The plans of co-operation between the public libraries and public schools of Detroit, Cleveland, Milwaukee and numerous other cities should be carefully examined. The help the city teacher can gain through the children's rooms with their attractive furnishings, beautiful books, and enthusiastic librarians specially trained for this line of work, can be studied in the work at Pratt Institute, Toledo, Springfield, and many other places. But few teachers assigned to the so-called slum districts of our cities have as yet thought of the great assistance to be gained through the Home Library system as conducted at the Carnegie Library, Pittsburg.

Nor is it quite true that help is pro-

vided for the city teacher only, as the rural teacher so often thinks. New York, Wisconsin, Connecticut, Massachusetts, Iowa, and many other states and organizations have given proof of the aid the Traveling Library system has given the teacher of the villages and rural districts. New York has gone even farther and shown that pictures and lantern slides may be circulated in the same manner.

A teacher, armed with a knowledge of these matters, is one to gain the confidence of his school board and advise the members intelligently. He is able to meet the board's declaration that it is impossible to furnish sufficient books and pictures to carry on the work of the school successfully with the information that other places have found it possible and practicable and give also their plan of work.

The normal school student has not the opportunity of going as deeply into the science of his many subjects as has the specialist of one. He should, therefore, in his normal course secure a knowledge of the sources of material and a foundation in bibliography that will make him a life student and a competent guide to his pupils.

Truly, as a pamphlet published by the Library Section of the National Education Association advocated, every school having to do with the training of teachers should offer some course in the use of books and libraries.

OUR COLOR SUPPLEMENT.

THE BLUEJAY.

(*Cinocitta cristata.*)

BY EDWARD B. CLARK.

The Bluejay is a beauty, but if it be true that the only true beauty consists in beauty of character, then the Bluejay is a most unlovely creature. He looks like a knight of the olden time clad in his coat of steel blue mail with his helmet on his head. There I am afraid the resemblance ceases, for while all the ancient knights were "in honor bound," this bird knight is very much of a thief. The Bluejays in the course of a season destroy hundreds of the eggs of many varieties of our most useful birds. Accordingly he is hated by the entire bird kingdom and his appearance near the nest of some small songster is usually the signal for the gathering of all the feathered residents of the neighborhood. There is a tumult of voices and some of the braver of the feathered throng do not hesitate to attack the Jay, but he pays little heed. He is after a breakfast of fresh eggs and he generally secures it.

The Bluejay has some good traits, the most notable one being bravery. He does not hesitate to attack snakes and cats, not only in defense of his nest, but simply upon sight. The Jay is probably

the only one of the smaller birds for which Tom and Tabby have a wholesome respect.

The Jay's voice is ordinarily one of the harshest sounds in nature. He has but one note which by any standard can be accounted sweet and this note he uses sparingly. It is a sort of a liquid utterance and is confined almost wholly to the courtship season. He stays with us, in the northern states, all through the winter. It is then, in the absence of almost all other bird songs, that the harsher notes of the Jay are not altogether displeasing to the bird lover. The Jay finds his perfect setting in a winter day. His coloring makes him seem like a bit broken off from the blue sky and the edge of a cold gray cloud.

In the eastern states the Jay is a shy bird. He builds his nest at a distance from human habitations. The reason is not far to seek. The bird has been persecuted there on account of this beauty. In the middle west the Jay is a doorstep bird and takes little pains to conceal his homestead.

THE BALTIMORE ORIOLE.

BALTIMORE Orioles are inhabitants of the whole of North America, from Canada to Mexico. They enter Louisiana as soon as spring commences there. The name of Baltimore Oriole has been given it, because its colors of black and orange are those of the family arms of Lord Baltimore, to whom Maryland formerly belonged. Tradition has it that George Calvert, the first Baron Baltimore, worn out and discouraged by the various trials and rigours of temperature experienced in his Newfoundland colony in 1628, visited the Virginia settlement. He explored the waters of the Chesapeake, and found the woods and shores teeming with birds, among them great flocks of Orioles, which so cheered him by their beauty of song and splendor of plumage, that he took them as good omens and adopted their colors for his own.

When the Orioles first arrive the males are in the majority; they sit in the spruces calling by the hour, with lonely querulous notes. In a few days however, the females appear, and then the martial music begins, the birds' golden trumpeting often turning to a desperate clashing of cymbals when two males engage in combat, for "the Oriole has a temper to match his flaming plumage and fights with a will."

This Oriole is remarkably familiar, and fearless of man, hanging its beautiful nest upon the garden trees, and even venturing into the street wherever a green tree flourishes. The materials of which its nest is made are flax, various kinds of vegetable fibers, wool, and hair, matted together so as to resemble felt in consistency. A number of long horse-hairs are passed completely through the fibers, sewing it firmly together with large and irregular, but strong and judiciously placed

stitching. In one of these nests an observer found that several of the hairs used for this purpose measured two feet in length. The nest is in the form of a long purse, six or seven inches in depth, three or four inches in diameter; at the bottom is arranged a heap of soft material in which the eggs find a warm resting place. The female seems to be the chief architect, receiving a constant supply of materials from her mate, occasionally rejecting the fibres or hairs which he may bring, and sending him off for another load more to her taste.

Like human builders, the bird improves in nest building by practice, the best specimens of architecture being the work of the oldest birds, though some observers deny this.

The eggs are five in number, and their general color is whitish-pink, dotted at the larger end with purplish spots, and covered at the smaller end with a great number of fine intersecting lines of the same hue.

In spring the Oriole's food seems to be almost entirely of an animal nature, consisting of caterpillars, beetles, and other insects, which it seldom pursues on the wing, but seeks with great activity among the leaves and branches. Its also eats ripe fruit. The males of this elegant species of Oriole acquire the full beauty of their plumage the first winter after birth.

The Baltimore Oriole is one of the most interesting features of country landscape, his movements, as he runs among the branches of trees, differing from those of almost all other birds. Watch him clinging by the feet to reach an insect so far away as to require the full extension of the neck, body, and legs without letting go his hold. He glides, as it were, along a small twig, and at other times moves sidewise for a few steps. His motions are elegant and stately.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A BRIEF TOPICAL SURVEY OF UNITED STATES HISTORY.

The authors, Dr. Oliver P. Cornman and Dr. Oscar Gerson of the Philadelphia School system, have prepared this little work "in response to a general demand for a text-book which could be employed in teaching United States history by means of topical reviews. In order to present the historical review from new and interesting points of view, many teachers have found it necessary to prepare outlines or syllabi of lectures that their classes may be furnished with definite material for study. The present work is an outgrowth of a series of such notes prepared by the authors for use in their respective schools." The marked features of this book are; (1) It reviews without repetition; (2) It organizes the knowledge already acquired, bringing in close relation the essential forces and successive states in the development of great movements. This connecting of links in the chain of historical facts gives the pupils a broad knowledge and a broad range of view of the history of his country and an intelligent attitude toward its institutions. For systematizing the pupil's knowledge of the relation of facts and classifying his views of the influences which have determined policies and thereby rounding a boy into shape for his future acquisitions to be readily related to past history, this book should accomplish a much needed work. (60 cents. D. C. Heath & Co., Boston and Chicago.)

A HISTORY OF THE UNITED STATES.

This, a new edition of Allen C. Thomas's History of the United States, has been thoroughly revised and largely rewritten and brought down to the summer of 1901. It is a new book. The maps are numerous and accurate. There are over two hundred illustrations, obtained from authentic sources. A valuable feature is the topical analysis printed on the margin of each page. At the close of each chapter there is a concise summary. Professor Thomas's earlier work received the unqualified praise of historians, critics and teachers. The same characteristics, which won for the preceding edition these good opinions, are retained. (\$1.00. D. C. Heath & Co., Boston.)

AMERICA'S STORY FOR AMERICA'S CHILDREN.

While the series does not present an historical romance, the personal and picturesque ele-

ments of the stories will prove fully as attractive to pupils as a romance and will supplement the regular instruction in history in an effective manner. Unusual care has been taken to have every statement of fact historically accurate and the black and white illustrations are correct. This series of five volumes is edited by Mara L. Pratt. Three volumes have been issued. Book I, The Beginner's Book, is introductory to the series and is adapted to third and fourth year classes. Book II, Exploration and Discovery: 1000-1609. This volume tells of the great discoverers and explorers from the time of Leif Ericson to Henry Hudson. Book III, The Colonies, recently received from the press, tells the story of the founding of the first settlements on this continent and of the beginnings of the thirteen colonies. Books IV and V are in press. (Book I, 35 cents; Book II, 40 cents; Book III, 50 cents. D. C. Heath & Co., Boston.)

COLOMBA.

Colomba is perhaps the best of the Corsican stories written by Prosper Merimee, and it gives one of the clearest analyses of the conditions existing in Corsica that one could possibly find. Sainte-Beuve says: "If you wish to know Corsica, you are spared a trip to it—you have Colomba." The story is a reflection of the author's contrasts of character, for he was both a critic and courtier, a dilettante and diplomat, a politician and novelist, a linguist and litterateur. This book, edited by A. Guyot Cameron, Ph. D., is in the purest of French and will well repay a careful study. (75 cents. Henry Holt & Co., New York.)

CONSTRUCTION WORK.

The subject is treated in its relation to number, literature, history and nature work. Mr. Edward F. Worst, the editor, through the pages of this book aims to teach the child to think as well as make and to develop the mind as well as the ability to construct. It is believed that this work will aid teachers in their labors and become a favorite with the little children of our common schools. (75 cents. A. W. Mumford, Chicago.)

DICKENS AS AN EDUCATOR.

James L. Hughes has done for Dickens in his "Dickens as an Educator" what Dickens did for Froebel—understood him, was fully in sympathy with him and had the ability to interpret him. The educational aspect of Dickens' writing is, of course, the leading topic

dealt with and one is conscious anew of how modern are his ideas and how great the love and wisdom of his heart. To the person who has made little of a study of Dickens, no better introduction to his works could be found, as the author has gotten right to the heart of the man who wrote *Parents, teachers, ministers*—all who have to do with childhood would do well to study "Dickens as an Educator." That he has pictured 28 schools with masters, mistresses and pupils shows how intense and earnest was his interest in schools and their relation to child-life. That Mr. Hughes has directed our attention to literature as a source of child-knowledge is a point of value for the general good. Although Dickens wrote to aid the children of his generation his work is not yet done, and in this volume a wonderful impetus is given to its fulfillment. (\$1.50. D. Appleton & Co., New York and Chicago.)

ELEMENTS OF PLANE GEOMETRY.

This work, edited by Alan Sanders of Cincinnati, and intended for the use of classes in high schools, academies and preparatory schools, contains several distinctive features. Some of the more obvious steps of the demonstrations are omitted in the propositions after the first few, thus forcing the pupil to reason for himself. Immediately after each proposition there are introduced exercises bearing directly upon its principle, but involving variations in its application which require original work for their solution. All constructions, such as drawing parallels, erecting perpendiculars, etc., are given before they are required to be used in demonstrations. Exercises, which may be omitted at the discretion of the teacher, and which involve the principles of modern geometry, follow their proper propositions. Whenever possible the converse of a proposition accompanies the proposition itself. Many exercises, drawn largely from the entrance examination papers of the leading colleges and scientific schools, are given at the end of the book. (75 cents. The American Book Company, New York and Chicago.)

IN AND AROUND THE GRAND CANYON.

American interest in the wonderful Grand Canyon of Arizona has greatly increased in the last few years, and it is now recognized as the most stupendous scene to be found on this continent. The author of this work has for ten years been exploring the many wild and picturesque trails of the canyon. He has followed carefully all possible traces of the early explorers, and relates, often in their own fresh, vivid words, the records of their thrilling adventures and hair-breadth escapes. Adventures so wild that they rival those we read in the most sensational fiction, but stern facts, taken from government records. The author himself met with many perilous experiences. He finds the scenery magnificent beyond description, the Indians and their legends and customs picturesque, and the life of a traveller and explorer fascinating in spite of hardships. It may be truthfully said that this book

"Will be the standard with reference to the main features—historic, scenic and scientific—of the Great Canyon of the Colorado." It is the result of the visit of ten years' of the author's life to this, one of the most sublime spectacles of earth. This beautiful book contains 346 pages and is profusely illustrated. Those who have had the great pleasure of listening to the lectures of its enthusiastic author, George Warton James, will surely enjoy his story as related in these printed pages. (\$3.00. Little, Brown & Company, Boston.)

OVID—SELECTED WORKS.

This very attractive edition of Ovid's selected works is edited by Frank J. Miller, Ph. D., Professor of Latin in the University of Chicago. Its appearance is very opportune, for now that teachers in secondary schools are alive to the need of an easier and more interesting text for supplementary rapid reading, we feel sure that this book will meet with a hearty reception. Nevertheless, it will also be welcomed by advanced students. Instead of the ordinary, unsatisfactory edition of selections, selections are given here from the different works of the poet, with an analysis in English, and with all omitted parts given in epitome, each in its proper place. The student will, therefore, be able to connect the long array of stories as written by the poet. The notes give abundant assistance in the translation and syntax of difficult passages, with much historical and archaeological information. The vocabulary and illustrations have been selected particularly for this edition. (\$1.40. The American Book Company, New York and Chicago.)

PLAIN USES OF THE BLACKBOARD.

The authors, Dr. and Mrs. Wilbur F. Crafts, prepared this attractive little book for the purpose of showing that blackboard exercises and other visible as well as verbal methods of illustration are legitimate ways of teaching Bible truths, and also that even blackboard exercises are practicable. The book is well and copiously illustrated with diagrams and pictures. (\$1.00. Jennings & Pye, Cincinnati.)

STRANGE PEOPLES.

This is the first volume of a series of ethnogeographic readers, edited by Dr. Frederick Starr of the University of Chicago. It is an interesting reader, for everything from the pen of Dr. Starr is interesting, makes no pretense to systematic treatment. Only a few people are taken, here and there, almost at haphazard, to illustrate the marvelous richness of the field for study which even now is presented by the strange peoples of the globe. (40 cents. D. C. Heath & Co., Boston.)

SYSTEMATIC METHODOLOGY.

"This book is intended for that great and growing body of earnest teachers and students of education who believe that there is an underlying philosophy of teaching. It contains

little that will interest such as are in search of ready-made materials and attractive devices for the use in the classroom, to relieve the teacher from the labor of thoughtful preparation." The author, who is Dr. Andrew Thomas Smith, Principal of the State Normal School, Mansfield, Pa., has aimed to furnish a systematic treatment of the problems of teaching. He does not claim that it is an exhaustive treatment, but he believes it to be one without contradictions, and with sufficient emphasis upon essentials to make those who master it and who possess the elements of a proper personality able to teach with an intelligent regard for the rationale of their art. He treats the subject under three heads. Part I, nature and development of the mental faculties; part II, general philosophy of method; part III, applied methodology. (\$1.25. Silver, Burdett & Co., New York and Chicago.)

THE EDUCATION OF TEACHERS.

This thought-provoking book is written by Dr. W. H. Payne, Chancellor of the University of Nashville. To know Dr. Payne is to admire him.

Dr. Payne is a man with a message—the sort of message that compels attention. One must hear him through, though one may not agree with him all the way through. He goes to the very core of the matter, and, having found it, talks with us about it face to face, as a man speaketh unto his friend. There are eight wonderfully stimulating chapters, every one of which one will want to read over and over again. Teaching, Dr. Payne insists, is a spiritual art, and is to be classified with music, poetry and oratory rather than with the mechanical arts—the arts that deal with matter in its fixed and uniform relations. As teaching has to do with spirit, methods of teaching should not be fixed, but flexible and fluid, and in all intelligent and effective teaching principles rather than rules should be held at a premium. When methods become uniform teaching becomes mechanical and wooden.

Dr. Payne says that while a certain amount of mechanism is necessary in school administration, when a love for the mechanical has become a prevalent spirit, the higher life of the school will be destroyed. Where masses of children are to be taught by a comparatively small number of teachers too much reliance is placed on the mechanics of school administration, and there is many a school system highly organized as a machine which provokes the inquiry, "Can these dry bones live?"

There is an appendix containing two valuable papers, "The Universal Vocation" and "A Theory of Light." (\$1.50. B. F. Johnson Publishing Company, Richmond, Va.)

THE MERCHANT OF VENICE: THE LAUREL CLASSICS.

The edition of the Merchant of Venice was prepared to meet the needs of young students. The author, Mr. Frederick Mauley, has avoided "the introduction of any matter calculated to weaken the interest of the student or to interfere with his enjoyment of the play

as a great work of art." He truthfully says: "I have done my best to give every aid necessary to the mastery of grammatical and etymological difficulties, and to provide such commentaries as, in my opinion, might enable the student to form an appreciative judgment of the play as an example of Shakespeare's dramatic art." Valuable notes and a glossary are appended. (50 cents. C. C. Birchard & Company, Boston.)

THE STORIES OF MY FOUR FRIENDS.

This is a fascinating little book containing one hundred pages and many tasteful illustrations. There are seven Nature stories of the author's four friends, Spring, Summer, Autumn and Winter. They were written by Jane Andrews and edited by Margaret Andrews Allen. It is an interesting book to read to a group of children at the fireside. (45 cents. Ginn & Co., Boston.)

THE STORY OF A CHILD.

This is the first English edition of this story. It was translated from the French of Pierre Loti by Caroline F. Smith. There is an introduction by Edward Howard Griggs. Mr. J. M. Greenwood, Superintendent of the Kansas City schools, says of this work:

"While I have watched with keenest interest the educational movement in this country called child study, I have felt inwardly that the observers or check-markers with all their data were not getting hold of the real thing itself. I have measured the heights of many children, weighed them wholesale and retail, tested them physically and mentally and morally in many ways, asked them questions, probed into the secret chambers of their souls as far as I could go with the permission of the probed, yet, at the very best, I could get here and there only obscure glimpses of that agent we term mind. It is true that I could see clearly enough the results of mental, moral and physical action interpreted in terms of my own thoughts and feelings, but I could never be quite sure that the interpretation was not the reading of myself into what possibly may have been the child's thoughts and feelings. In other words, I can take one of the best violins and explain its mechanical construction as an instrument, but that will not tell one how the most delightful music can be by a master artist extracted from it. So it has been with our friends who have gone almost daft on child study. They have examined the human machine and noted with wonderful patience and not a little parade of learning many mechanical and psychological facts, great heaps of them, and called these fragments child, but these, as important as they are, are not children any more than long measure is thought, or that butter expresses the love of the cow for her young calf. Thought cannot be better expressed in such terms. Soul facts cannot be reduced to either physical or chemical equivalents.

"It is indeed refreshing to turn from these materialistic efforts of interpretation and to get at the thoughts of a child as the child

itself thought and felt. 'The Story of a Child,' by Pierre Loti, is indeed a most welcome and appropriate contribution to child literature at this time, and C. C. Birchard & Co. are entitled to the gratitude of the educators of America for bringing out this remarkable volume on child study. Pierre Loti, that master of word painting, has given to the world his impression of his own childhood from the earliest awakenings of his mind until his fourteenth year. He has endeavored to reproduce the most important childish feelings, emotions, desires and aspirations of his life as they impressed him. Here is the man putting his childish fancies into sentences in order that the reader may see exactly how a timid, sensitive little boy felt and acted. It is a child revealing itself, and this is the only standpoint from which the child, as a rational being, can be successfully studied. It is the only book on the subject that really portrays a child as the child itself.

There are literary contributions which have an interest about them that always appeals to the highest instincts of human nature, and it is in this direction that 'The Story of a Child' appeals so strongly to one's sympathy. Pierre Loti knows child life as he lived it and felt it. What he lived through is the common lot of all. The faith in his mother unbounded, so pure, so trustful, all the nooks and crannies in which he built up an outer and an inner world, how all these enter into the very fiber of one's nature. The book is a mirror in which each sees his own reflection—himself. It is the child's world with its ups and downs. But why go on? Who should be most benefited by reading this book? The men and women who are engaged in teaching children. They can read it in the light of all facts of child-life. They ought to read it, as I have read it, from cover to cover." (\$1.25. C. C. Birchard & Co., Boston.)

THE STORY READER.

This reader by Alfred E. Logie and Claire H. Necke, assisted by Sarah A. Milner, is the latest addition to the well-known Eclectic School Readings and furnishes a series of simple and interesting stories, carefully graded, attractively illustrated, and well suited to appeal to a variety of interests in children. Many of these stories suggest seat work, not a few can be easily dramatized, and some are based on the child's tendency to imitate the social world about him. Valuable suggestions are printed in the back of the book to guide the teacher in supplementary work based on the themes of the stories. The material here presented was selected from a much larger amount which had been thoroughly and carefully tested in the class-room, and the book is therefore entirely practical in plan and contents. (30 cents. The American Book Company, New York and Chicago.)

THE XXTH CENTURY SHAKESPEARE —JULIUS CAESAR.

In the preparation of books for the use of students one of the most important features is the character of the typography and the paper. The page should be easily read without tiring the eyes. In this the publishers of this edition of Julius Caesar have been admirably successful. "It is intended that this shall be a pupil's rather than a teacher's edition—one to aid the pupil in the preparation of his lessons rather than the teacher in the formation of a plan of recitation." The author, Mr. Cyrus Lawson Hooper, of one of Chicago's high schools, is eminently fitted to prepare the notes, which are so necessary to the welfare of the beginning student of Shakespeare. These notes are analytical and copious. They are not too extensive. The student must seek for himself by careful reading. He is guided by the notes. The introduction is especially valuable. In a concise manner it treats of "Shakespeare: His People and His Theater," "A Day in the Life of an Aristocratic Roman," "The Meter of the Play," a table showing the "Chronology from the Times of the Gracchi to the Battle of Philippi." (30 cents. Ainsworth & Co., Chicago.)

WINSLOW'S NATURAL ARITHMETIC.

The author of this arithmetic is Isaac O. Winslow, M. A., principal of the Thayer Street Grammar School, Providence, R. I. It is published in three graded volumes.

The purposes of this series, as set forth by the author, are: 1. To present the subjects in a spiral order, treating together the easier principles of the various topics and reserving the more difficult until the child has gained the power to apprehend them easily. 2. To make the work easy, the pupil being kept busy with a varied application of the principles already mastered, instead of being too rapidly crowded forward into greater difficulties. 3. To give the subject variety and interest, by basing the problems upon facts and principles gathered from the different studies, and thus correlating arithmetic with the other branches, while adding distinctly to its vividness and attractiveness. 4. To develop genuine mathematical thought, by promoting originality in the pupil's work and by developing fully each new principle before it is put into practice. 5. To give prominence to the idea of magnitude, recognizing the psychological fact that all mathematical knowledge is a system of relations, or ratios. These objects seem to us to have been satisfactorily accomplished in the series, and we believe that teachers will welcome this simple, logical and well-graded course. (Book I, 30 cents; Book II, 40 cents; Book III, 50 cents. American Book Company, New York and Chicago.)

The narrative surpasses in retrospective reach all other records of childish
experience.—JAMES SULLY.

Such testimony as this is, in itself, sufficient proof of
the greatness of

The Story of a Child

Translated from the French of

PIERRE LOTI by **CAROLINE F. SMITH**

With an introduction by

EDWARD HOWARD GRIGGS

The following, however, may be added to show that besides the praise bestowed by the great psychologists of the world, *The Story of a Child* has won the admiration of our foremost educators, literary artists and scholars:

An interesting and valuable translation. I am greatly pleased to see this valuable work made accessible in English and to the teachers of our country.
WILLIAM T. HARRIS, U. S. Commissioner of Education.

The translator has made the story read as if it had come straight from the font.
JOHN VANCE CHENEY.

"— the first real work of art in the line of child study;—the most delicate, the most true to life, the most refreshing and inspiring."
THE NEW ENGLAND JOURNAL OF EDUCATION.

There is in Loti's work a delicacy, a subtlety of understanding, a poetic instinct, and the play of a dainty and lively fancy, that lend to his descriptions a quality that is hardly elsewhere to be found.

CHARLES DUDLEY WARNER.

The translator has caught the subtle charm of Loti's style in an amazing degree.
EDWARD HOWARD GRIGGS.

Beautifully bound; Oriental paper; Gilt top; 312 pages; \$1.25

C. C. BIRCHARD & COMPANY

221 Columbus Avenue

-

-

Boston, Mass.

THE UNIVERSITY LAW SCHOOL OF ILLINOIS.

ROSWELL SHINN, LL.D., Dean.

52 DEARBORN STREET,
CHICAGO.

Offers **unusual facilities** for the study of the science of the law at a **minimum cost** and equips students for the successful practice of the profession.

It has an **unexcelled faculty** of eminent practitioners especially skilled in the field of their chosen subjects, who seek not to obtain personal gain but to impart desired knowledge.

It is always open for the admission of students, and has preparatory and post-graduate courses.

Correspondence solicited.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled. The word marked according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—*E. E. McIntire, Superintendent of Schools.*

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN & TEACHERS' AGENCY.

The South and West offer better advantages to aspiring teachers than any other section. THE SOUTHWESTERN TEACHERS

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to

CLAUD J. BELL, Proprietor.

TOKOLOGY Complete Ladies' Guide

By ALICE B. STOCKHAM, M.D.

Prepaid cloth, \$2.25; Morocco, \$2.75. Sample pages free. 500,000 sold. Lizzie M. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of 'Tokology.'" Always saves pain—often saves life.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago

TRUE MANHOOD

A manual of
SEXUAL SCIENCE
for young men.

By E. R. Shepherd.

Gives knowledge that leads to purity in thought, word and act, revealing truths with a chaste hand. Endorsed by the Y. M. C. A. and prominent ministers and physicians everywhere.

Atchison Baptist: "It tells what many parents do not know, and what more are afraid to tell." Levant cloth, 322 pp., postpaid, \$1.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago.

\$4.20 FOR \$2.10

Another Combination Offer that Means Something.

BIRDS AND NATURE one year\$1.50
 *Ten Back Numbers BIRDS AND NATURE 1.50
 60 Colored Pictures from BIRDS AND NATURE..... 1.20
 The total amount of value.....\$4.20

**ALL FOR
 \$2.10**

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"It is one of the most beautiful and interesting publications yet attempted in this direction. It has other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little magazine abundant prosperity."—*Chas. R. Skinner, State Supt., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."—*Dr. Elliott Coues.*

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial reception."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls of my rustic retreat, 'Slab Slides.'"—*John Burroughs.*

"When one considers the low price at which you sell **BIRDS**, the number and excellence of the plates are surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of **BIRDS AND NATURE** may be substituted for the ten back numbers.

A sample of this magazine and of **The Review of Education** for a dime and two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

**National
 Electrotpe Co.**

Nickeltypers

Electrotypers

Engravers

298-306 DEARBORN ST.

TELEPHONE HARRISON 765

CHICAGO

The Review of Education

strikes us as being about the best educational monthly we have ever seen. It is not of the common sort—such papers are headed by an all wise (?) editor who is bound to fill the editorial page and all other vacant space with his own thoughts. This journal rather gives little of editor's chat, and that little is good. For the remainder of printed matter, a few well known educational writers treat on timely subjects, and from the pages of the principal journals of America articles relating to education are reproduced. Two colored supplements are given each month, those for June being the robin and the meadow lark.—*Exchange.*

NO HIRED DENTISTS

PRIVATE OFFICE ♦♦♦ PAINLESS METHOD



Prices Cut in Two

For fifteen days readers of this magazine may take advantage of the following prices (strictly cash) by presenting this ad:—

Gold Crown, \$3.50
 Porcelain Crown, \$4.00
 Gold Fillings, \$1.00
 Best Plates, \$4.00
 Silver Fillings, 50c

~~50c~~ This is positively a reduction of 50 per cent.


Best material used, work guaranteed for 10 years. Fillings inserted and teeth extracted without pain.

DR. THOMAS E. WALSH, Dentist
 167 Dearborn St., Chicago

FOURTH FLOOR, N. E. COR. MONROE ST., OPPOSITE FIRST NATIONAL BANK

Hours—9 to 6. Sundays—10 to 1

Phone—Central 539



WEBSTER'S INTERNATIONAL DICTIONARY

WEBSTER'S INTERNATIONAL DICTIONARY

NEW EDITION JUST ISSUED

NEW PLATES THROUGHOUT

Now Added **25,000 NEW WORDS**, Phrases, Etc.

Rich Bindings • 2364 Pages • 5000 Illustrations

Prepared under the supervision of W. T. Harris, Ph.D., LL.D., United States Commissioner of Education, assisted by a large corps of competent specialists.

BETTER THAN EVER FOR GENERAL USE

Also Webster's Collegiate Dictionary with Scottish Glossary, etc.

"First class in quality, second class in size."

Spectimen pages, etc., of both books sent on application.

G. & C. MERRIAM CO., Publishers, Springfield, Mass., U. S. A.

GET THE BEST

FIVE NEW BOOKS

FOREST TREES.

BY JULIA E. ROGERS, Cornell University.

Ready about Dec. 1st.

12mo. About 350 pages. Price, \$2. Advance orders, \$1.

This book will be illustrated with the pictures from our Typical Forest Trees in Photogravure and will be the most beautiful and practical book on trees ever published. It will also contain 200 drawings and other illustrations.

Miss Rogers was science teacher in the high schools of Des Moines and Cedar Rapids, Iowa, and as an institute lecturer in Nature Study attained a prominent place among the educators of the state. In 1900 she was one of Prof. Bailey's assistants in the Cornell Summer School of Nature Study, and the two years following were spent in postgraduate study in Cornell University.

A NEW BOOK ON BIRDS.

BY EDWARD B. CLARK.

16 Colored Plates.

Ready Nov. 1st.

We have had so many calls for an elementary bird book to be illustrated with our color plates reduced in size that we have decided to publish one.

Price, \$1. Orders received in advance of publication, 75 cents.

A Boy's Trip to Yellowstone Park.

BY OLIN D. WHEELER.

100 Illustrations.

Ready Oct. 1st.

This is a charming story, adapted for supplementary reading in schools. No one is more capable than Mr. Wheeler to write a delightful story about this most interesting region. Geography teachers will welcome it.

Price, 75 cents. Orders received in advance of publication, 50 cents.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity with terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 5½x8½ in. 75 cents.

FAMILIAR BIRDS.

An Interesting Book on Familiar Birds, by JOSEPH GRINNELL, President of the Cooper Ornithological Club, of California.

Illustrated with 16 color pictures. Price \$1.00. Advance orders, 75 cents.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

To THE **DAN AMERICAN EXPOSITION** *AND NIAGARA FALLS.*



THE WABASH
Has its own rails
and is the short-
est line to
BUFFALO
AND THE
FALLS.

Stop-overs given
at both points on
all tickets.

For Descriptive Matter, Rates, etc., call on nearest
Ticket Agent, or address
C. S. CRANE, Gen'l Pass'r and Ticket Agent, ST. LOUIS,
or F. A. PALMER, Ass't Gen'l Pass'r Agent, CHICAGO.

AMERICA'S MOST POPULAR RAILWAY

CHICAGO
AND
ALTON

PERFECT PASSENGER SERVICE

BETWEEN

CHICAGO AND KANSAS CITY,
CHICAGO AND ST. LOUIS,
CHICAGO AND PEORIA,
ST. LOUIS AND KANSAS CITY.

THROUGH PULLMAN SERVICE
BETWEEN CHICAGO AND

HOT SPRINGS, DENVER, CO.,
TEXAS, FLORIDA, CALIF.,
CALIFORNIA, OREGON.

IF YOU ARE CONTEMPLATING A TRIP, ANY PORTION OF WHICH CAN BE MADE OVER THE CHICAGO & ALTON, IT WILL PAY YOU TO WRITE TO THE UNDERSIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

Wonderland 1901

the annual publication of the **Northern Pacific Railway** will be found a distinct advance, in some respects, upon even its immediate predecessor, **Wonderland 1900.**

Its cover designs and eight chapter headings are by Alfred Lenz, of New York, from plastique models and are splendid examples of art.

There is within the covers of the book much historical matter, some of it new, as well as purely descriptive narrative.

The three principal chapters relate to the history of the unique **Northern Pacific Trademark**, the **Custer Battlefield** in Montana, and **Yellowstone Park**. Each is profusely illustrated, the Trademark chapter in colors. This trademark is of Chinese origin and is 5,000 years old. Its story is a strange one.

It is safe to say that **Wonderland 1901** will be in greater demand than any preceding volume of the **Wonderland** family, and, as heretofore, it will be sent by Chas. S. Fee, St. Paul, Minn., to any address upon receipt of the postage, six cents.

THE St. Paul Road.

(Chicago, Milwaukee & St. Paul Ry.)

**ELECTRIC-LIGHTED
TRAINS**

DAILY BETWEEN

Chicago
Des Moines
Sioux City
Omaha

All Coupon Ticket Agents sell Tickets via
Chicago, Milwaukee & St. Paul Ry.

F. A. MILLER, General Passenger Agent,
CHICAGO, ILL.

Big 4 Route

BEST LINE FROM THE

North, Northwest and West

TO

INDIANAPOLIS
CINCINNATI
LOUISVILLE

AND ALL POINTS

South and Southeast

For maps, rates, etc., address

W. J. LYNCH, G. P. & T. A.
CINCINNATI

ONLY \$50.00 TO CALIFORNIA AND
RETURN.

General Convention Episcopal Church, San
Francisco, Cal., Oct. 2, 1901.

For this meeting the Chicago Great
Western Railway will on Sept. 19 to
27, sell through excursion tickets to
San Francisco, good to return Nov. 15,
1901, at the low rate of \$50.00 for the
round trip. Rates via Portland, Ore.,
\$9.00 higher. Stop-overs allowed.
For further information inquire of any
Great Western Agent or J. P. Elmer,
G. P. A., Chicago, Ill.

Tours in the Rocky Mountains.

The Denver & Rio Grande and the Rio
Grande Western offers to tourists in Colo-
rado, Utah and New Mexico the choicest
resorts, and to the transcontinental traveler
the grandest scenery. Two separate and
distinct routes through the Rocky Moun-
tains, all through tickets available via
either. The direct line to Cripple Creek,
the greatest gold camp on earth. Double
daily train service with through Pullman
palace and tourist sleeping cars between
Chicago, St. Louis, Denver, San Francisco
and Los Angeles, and Denver and Portland.
The best line to Utah, Idaho, Montana,
Oregon and Washington via the "Ogden
Gateway." Dining cars (service ala carte)
on all through trains. Write S. K. Hooper,
G. P. & T. A., Denver, Colorado for illus-
trated descriptive pamphlets.

— \$4.20 FOR \$2.10 —

Another Combination Offer that Means Something.

BIRDS AND NATURE one year.....	\$1.50	ALL FOR \$2.10
Ten Back Numbers BIRDS AND NATURE	1.50	
60 Colored Pictures from BIRDS AND NATURE.....	1.20	
The total amount of value.....	\$4.20	

A. W. Mumford, Publisher,

203 Michigan Avenue, - - - CHICAGO

MIDLAND UNIVERSITY

CHICAGO AND DIXON, ILL.

LAW The freshman year's study in the Chicago Law School gives a complete preparation for business life, and prepares for advanced standing, or second year, leading to degrees of LL.B., and LL.M. and prepares for admission to the Bar in all the States.

MEDICINE The major subjects are studied during the first year, so that the student can take advanced standing in any medical college leading to degree of M. D.

DENTISTRY The first year's work prepares the student for the laboratory in technical and operative work; the second year leading to degree of D.D.S.

PHARMACY The general subjects of Pharmacy are Chemistry, Botany, Microscopy and others; prepares the student for the second year and the State Board of Examination leading to degree of Ph. C.

FULL BUSINESS COURSE including Bookkeeping, Business Correspondence, Business Arithmetic, Business Forms, Business Penmanship, Actual Business and Office Work. Shorthand and Typewriting Course; the Elective system of Shorthand is taught, simplest, most easy of acquirement and the most rapid system extant.

NORMAL COURSE Leading to degree of B. Pd., and fitting for examination for Second Grade, First Grade and five-year State Certificate.

CLASSICAL COURSE Leading to the degree of A. B., and bringing the student into possession of a breadth of culture that is indispensable in a literary and professional life.

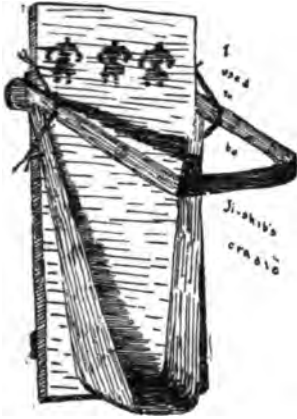
A COURSE IN SCIENCES The complete course comprehends Physics, Botany, Zoology, Geology, Astronomy, Physiology, Anatomy, Mineralogy, Algebra, Geometry, Higher Mathematics, Latin and German; leading to B. S. degree, to examination for a teacher's five-year or life certificate.

: UNIVERSITY EXTENSION :

HOME STUDY COURSES in "Correct English" conducted by Josephine Turck Baker, Editor of the Magazine. "Correct English;" Law, Literature and History, Latin, Greek, Hebrew, French, German, Elementary Sciences, Philosophy, Ethics, Aesthetics, and Logic. Political Science, Political Economy, Sociology. *Students may enter the regular University Courses at any time and receive credit for work in any of the above courses.* Extension courses lead to B. S., Ph. B., Lit. B., Ph. D. Laboratory work, comparative study, class-quizzes and lectures, under supervision of specialists, for advanced students. Special opportunities are offered at the Summer Seminar; courses are organized for this special work which continue from six to sixty days. Field Secretaries for the University are authorized under the corporate seal and signature of the Chancellor.

Board and room in private family \$2.50 to \$3.00 per week. Club rate for 50 to 100, \$1.25 to \$1.50 for table board. For information for the courses, address

J. J. TOBIAS, Chancellor, 115 Dearborn St., Chicago.



The Childhood of Ji-shib **the Ojibwa**

And Sixty-Four Pen Sketches

By
ALBERT ERNEST JENKS, Ph.D.

PRICE \$1.00

It is a book about which I find it difficult to speak in moderate terms, for it is extraordinary in its truth—its faithfulness to nature. There are few people who appreciate Indian character as it really is, and very few who know how to express that character in written words. This you have done with a fidelity which delights me as it must delight everyone who really knows Indians.—*Geo. Bird Grinnell.*

I have read it with great pleasure and I envy you your store of Ojibwa lore.—*Ernest Seton-Thompson.*

I have read it with exceeding gratification. You have caught with exceptional success those elusive characteristics of Indian thought expressed in oblation, fasting, preparation for warfare, and other peculiar customs. I congratulate you on your success in grasping the aboriginal character.—*Prof. W. J. McGee, Ethnologist-in-Charge, Bureau Ethnology, Washington.*

SOLD BY ALL BOOKSELLERS. Sent Postpaid by

The American Cressherman, Publishers
Madison, Wisconsin

Hanschmann's Kindergarten System

"Every mother should read this book."—*Mother's Journal*.

"Hanschmann's account of the life and work of Froebel is the most complete that has thus far been given us."—*London Journal of Education*.

"Hitherto the public has been dependent upon his 'Autobiography', which left much in obscurity. This life is complete and put in an interesting form."—*The Independent*.

"This is a most valuable book for teachers, and is well worth the price. No person can read it without forming a most profound admiration and affection for Froebel. The book contains valuable notes, some of which are short sketches of the lives of those who were connected with, or succeeded Froebel in his great work."—*Education Extension*.

"It seems that the last word on Froebel's literature has not been said. At any rate here is another opportunity for English readers to study the great teacher, and those who get this volume will not be disappointed."
* * * The work is an inspiration. It has a message for every teacher. The work of the printer and book-binder in this edition is in keeping with the content of the book."—*Inland Educator*.

This is a new life of Froebel, and will be welcome to all who have felt the incompleteness of his autobiography and of the books written about him. It shows what kind of man Froebel was, and how he came to elaborate his system; indeed, his biography is made the medium for tracing the growth and development of the Froebel idea from its very beginnings down to the establishment of the first Kindergarten. Just as Pestalozzi's great contribution to education was "Anschauung", or observation, thought, and deed in their right order, Froebel's great and final contribution to pedagogy was the doctrine of "Darstellung", or a vivid expression of the inner self by spontaneous activity. It goes hand in hand with the great Pestalozzian principle, and at the same time starts a new psychology of the child. It utilizes and brings into its service the child's sportiveness, imaginativeness, and love of production. It does not, as Mr. Herbert Spencer suggested, relegate the activities that serve for recreation and pleasure to the leisure moments of life, but embodies them as fundamental factors of education.

"Hanschmann's 'Life of Froebel' has long been regarded as the most complete account of the progress and development of Froebel's educational thought. Those who have been able to read German have hitherto had a great advantage over those who were confined to English so far as this work was concerned, but now all have this masterly treatment in good English. This is so clear, so readable, so inspiring, that one can but regret so many Americans have been long deprived of its helpfulness. Nowhere else does Froebel appear to so good advantage to readers of English."—*American Primary Teacher*.

Cloth, 12mo., pp. 253, \$2 00

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

Helps in Child Study.

1. *A Working System of Child Study for Schools*. By MAXIMILIAN P. E. GROSEMAN, Ph.D., late superintendent of the Ethical Culture Schools, New York. Cloth, 16mo., pp. 70. 50 cts.

This is a practical manual, giving the system actually employed at these well-known schools, with the blanks used, and many specimen reports from the files of the school. Reasons are given for the methods employed, and illustrations of the advantages derived. In a subject just now so overlaid with sentimentality by some of its advocates, it is refreshing to find a clear, sensible, practical description of work actually done.

2. *The First Three Years of Childhood*. By R. PEREZ, with an introduction by Prof. Sully. Cloth, 16mo., pp. 295. \$1.50.

This is of such general interest that it is included by the American Library Association in the list of books to be contained in every library.

"The first four chapters deal with the faculties before birth, the motor activities from the beginning of life till fifteen months, giving full and distinct examples under each period of development. Then the first perceptions, instincts, and sentiments are taken up. From chapter vi. to chapter xii. are given the intellectual tendencies. Chapter xii. is devoted to the æsthetic, and xiii. to the moral sense. Many of M. Perez's illustrations are from children under his own observation, but to these he adds examples from the observations of other scientists and psychologists who have kept records of their children's early years. Tiedemann, Sigismund, Sablah, Darwin, Professor Preyer, M. Tayne, are among the fathers quoted. From these he borrows no theories, but gives only the fruits of their real experience. * * * The order and the method of this book are thoroughly scientific, the language simple, and the style bright and interesting. After reading it one feels much better acquainted with the mysterious world of infancy, through which we have all passed, but of which we have retained so little memory."—*The Evangelist*.

3. *Tiedemann's Record of Infant Life*. An English version of the French translation and commentary of R. PEREZ. Paper, 16mo., pp. 45. 15 cts.

This English version was made by F. Louis Soldan, superintendent of schools, St. Louis, who says: "This essay is remarkable both on account of its contents and of the influence which its publication in France has had on the study of childhood. It is a reproduction of a little work by a German writer which, I think, was written about 100 years ago, but was completely forgotten until a French translation of it appeared in 1868, in the *Journal Général de l'Instruction Publique*, by Mr. Michélan. This translation attracted much attention, and seems to have given the first impulse to a number of most remarkable monographs on the development of childhood."

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these :

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man—what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. **THE REVIEW OF EDUCATION** contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. **THE REVIEW OF EDUCATION** does not seek to compete with its contemporaries, but rather to supplement them all.

2. **N. E. JOURNAL OF EDUCATION ;**
Weekly ; \$2.50 a year.

Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monroe, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.

3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**

Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.

4. **MODERN METHODS; \$1.00 a year.**

Our New Monthly.

The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.

5. **THE SCHOOL BULLETIN; \$1.00 a year.**

THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

The Song Budget Music Series.

\$1.50 PER DOZ., \$10 PER HUNDRED.

1. **The Song Budget.** Paper, small 4to, pp. 76, 15 cts. Leatherette, 25 cts.
2. **The Song Century.** Paper, small 4to, pp. 87, 15 cts. Leatherette, 25 cts.
3. **The Song Patriot.** Paper, small 4to, pp. 80, 15 cts. Leatherette, 25 cts.
4. **The Song Budget Music Series Combined**, containing all three of the above in one volume, with opening exercises for schools added. Cloth, small 4to, pp. 260. 50 cts.

The distinguishing features of the Song Budget Music Series, of which nearly half a million copies have been sold, are these:

- 1st. To give a good deal for the money.
- 2d. To give only the best music.
- 3d. To give music just as it was written.
- 4th. To give only songs that are strong.

The Sentence Method of Teaching Reading. By GEORGE L. FARNHAM. Cloth, 50 cts.

As the word method was a step above the alphabet method, so the sentence method is a step beyond the word method. "The unit of thought is the sentence," and if the child considers the words as units in learning to read, he must unlearn his habits of reading in order to read naturally. Mr. Farnham shows how much more easily children will learn to read, and how much better they will read, where this method is employed. The book is in general use all over the country; extensively used in Chicago the past year.

OLD STORIES RETOLD

With 59 Original Illustrations. By PAUL BINNER. Boards, 16mo, pp. 64. 25 cts.

It is no longer a question whether children shall read fairy tales. The Graggrinds have been silenced, and it is admitted that something else besides "facts" shall enter into the education of children. So the question is now how these fairy tales may be most attractively presented to the child, and surely never before have they appeared in more enticing dress.

EDUCATIONAL GAMES

Historical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards, 2½x3½ inches. 50 cts.

The cards contain 500 questions and answers, and afford a most interesting as well as profitable game for home and school.

Geographical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards 2½x3½ inches, 50 cents. Similar to Historical Game.

THE GAME OF INDUSTRIES

Is an educational game consisting of 100 cards and 400 questions and answers on the great industries of our country. 2½x3 inches, 25 cts.

LITERATURE GAME

By A. W. MUMFORD. 500 questions and answers on English and American Literature. 100 cards, 2½x3 inches, 25 cts.

SPECIAL OFFER.

. The Four Games to One Address Prepaid for \$1.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

Chicago.

The American Primary Teacher

Occupies a field distinctively its own, being devoted exclusively to principles and methods of elementary instruction. Its immense circulation in every state and territory in the Union is due to the fact that it contains such a large amount of practical matter suitable for classroom use. For teachers of Primary, Intermediate, and ungraded schools this periodical is invaluable. It comes next to a normal school course of training.

Methods.—A department in which the most expert teachers of the country present advanced and every-way-usable methods of teaching every subject demanded of the school. The work here presented is second to none found in book, periodical, institute, or schoolroom. The articles are profusely illustrated.

Devices.—In this department teachers of ungraded schools especially find much help. It furnishes the teacher with innumerable hints as to what to do to make school work attractive and profitable.

Things to Teach.—This department presents a variety of instructive material not included in the regular branches of school work.

For Reproduction.—Just the thing that every teacher must have. These Exercises are arranged in such a way as to save her the wear and tear of preparing them for herself.

Talks with Teachers.—Mr. Winship allows teachers to ask him any questions they please about school work, and gives terse and sensible advice.

Friday Afternoons.—Here six columns are devoted regularly to recitations, dialogues, exercises, etc.

It is the best Paper published for Primary Teachers.

Subscription Price, \$1.00 a year.

New England Publishing Company,
211-215 Pemberton Bldg., Pemberton Square,
BOSTON, MASS.

NEW YORK

ADOPTION.

"I beg to advise you that a contract has been awarded to you by the Board of Education."

A. E. PALMER, Sec'y of Board,
New York.

The above reference is to the first three volumes of our **BIRDS AND NATURE** and also the 168 loose pictures illustrating them. These books and pictures are not only adopted for use in the school libraries of New York, but are extensively used in schools everywhere. The first three volumes adopted contain 168 exquisite pictures of birds in natural colors produced by color photography. The list price per volume in cloth is \$1.50, the special price, \$1.15. Loose pictures assorted as desired, 2 cents each, in sets of 168, \$1.75. Address

A. W. MUMFORD,
New York, or 203 Michigan Ave., Chicago.

Some Notable Books for Teachers.

THE ELEMENTS OF GENERAL METHOD. (75c.) AND THE METHOD OF THE RECITATION. (\$1.)

By the McMURRYs lay the foundation for the modern practical methods which are applied in detail to the grades in the Special Methods for Geography, Literature and History, Reading and Science. The latter is the best book on its subject.

Such children's books as "Classic Stories," for the little ones (40 cts.) by Mrs. McMurry, "Stories of Indian Children" (50 cts.) by Mrs. Husted, and "Robinson Crusoe for Boys and Girls" (40 cts.) can be used as material for applying the methods developed in the McMurry Series in the primary grades. So can the "Story of Lincoln" (35 cts.) "The Story of Ulysses" (50 cts.) and others on our list.

"McCORMICKS SUGGESTIONS
on Teaching Geography" (50 cts.) is intensely practical.

Songs of the Tree-Top and Meadow is the long desired collection of good poems to teach the little ones. All your favorites for the primary grades are included. Copy for examination, 40 cts. **Lolani, the Little Cliff Dweller**, by Mrs. Alfred Baylies, and **Wagner Opera Stories** are the latest and best. They are on new subjects and will satisfy the desire for valuable new supplementary reading. The school edition of each is 50 cts., postagepaid.

School and Home Education (\$1.25)

Is the journal for teachers who are making a serious study of their profession, Geo. P. Brown, Editor. Its School and Home Department is good reading for school patrons as well. It is striving to encourage a more sympathetic union of the school with the home. Sample free. Ask for special terms to new subscribers.

Send for full descriptive catalog of all our publications.

THE PUBLIC SCHOOL PUBLISHING COMPANY,
BLOOMINGTON, ILLINOIS.

PRAISE FOR BIRDS AND NATURE.

- Send the magazine as I wish to continue to take it, since I have taken it from the very first.
DeKalb, Ill., July 9, 1901. Cordially, A. J. Blanchard.
- I have taken the magazine ever since it was published and would not like to do without it.
Plainfield, Ill., July 3, 1901. Mary E. Cropsey.
- I am a subscriber to BIRDS AND NATURE and think it is an excellent journal. I would not be without it for three times its subscription price.
Fairmount, Ind., July 31, 1901. John R. Little.
- I consider your magazine as useful as it is pretty.
Geneseo, N. Y., July 20, 1901. Theodore A. Flansburgh.
- I don't know how I ever did without these books. They are a constant source of delight as well as help in my study of Birds.
Waltham, Mass., May 24, 1901. Miss M. L. Walker.
- I received my last order in fine condition and was very much pleased with the pictures. They are just perfect to nature.
Temple, N. H., May, 1901. Harry M. Fiske.
- We esteem your magazine, BIRDS AND NATURE, very highly. It is in constant use in our family for reference.
Newburyport, Mass., May 29, 1901. Mrs. Horace Plumer.
- I am delighted with the contents of Vol. 9. I have been in Natural History work for twenty years and must say BIRDS AND NATURE surpasses any publication so far, for the student of nature.
Tuckerton, N. J., June 17, 1901. Dr. J. B. Olmsted.

TO THE READER OF THIS MAGAZINE . . .

Nine volumes of BIRDS AND NATURE were completed with the May 1901, number. These volumes contained illustrations of Birds, Birds' Eggs, Flowers, Mammals, Fish, Insects, Fruits, Shells and Minerals; and the text contained several valuable articles from the pens of well-known writers and educators. We shall continue to have BIRDS made the chief attraction, and at least four bird-plates will appear in each number. It is our purpose to publish a series of illustrations of gems and ornamental stones in Volume X, beginning with the June, 1901, number. The articles will be written by a high authority on the subject.

Among the color illustrations of future numbers the following may be mentioned:

OCTOBER, 1901.	NOVEMBER, 1901.	DECEMBER, 1901.
Olive-sided Flycatcher.	Carolina Wren.	Trivoli Hummingbird.
Yellow-bellied Flycatcher.	Pine Grosbeak.	Worm-eating Warbler.
Tree Sparrow.	Blackpoll Warbler.	White-eyed Vireo.
Black-throated Green Warbler.	Field Sparrow.	Chipping Sparrow.
African Lion.	Turquoise.	Topaz.
Alaskan Moose.	Spider Monkey.	Rhesus Monkey.
Polar Bear.	Hyena.	Asiatic Camel.
Beryl (Emerald)	Giraffe.	Zebra.

The preparation of the birds and other animals for photographing in colors will be under the direction of Mr. Frank M. Woodruff, of The Chicago Academy of Sciences. Mr. Woodruff will also assist the Editor in the selection of subjects.

During the publication of the nine volumes of BIRDS AND NATURE the following 416 colored plates have appeared:

261 Birds.	10 Landscapes.	3 Birds' Eggs (49 species).
49 Mammals.	7 Minerals and Ores (48 varieties).	1 Polished Wood Sections (6 varieties).
29 Flowers.	7 Shells (74 species).	1 Showing Change of Color in Birds' Feathers.
18 Medicinal Plants.	5 Fishes.	
11 Fruits and Nuts (20 species).	4 Reptiles (Turtles and Lizards) (4 species).	
10 Insects (75 varieties).		

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

NEW BOOKS

Spelling and Word-Building

By EUGENE BOUTON

Superintendent of Schools, Pittsfield, Mass.

The plan of the book is original. Words are taught as individuals. Pictures tell their meaning to the eye. Word-building exercises teach the phonetic laws that control the spelling of regular English words. Firstreader words only. Over 250 illustrations. (In Press.)

Gildersleeve-Lodge Latin Series

Selections from the Elegiac Poets, by Jessie B. Carter, Princeton University.

Cicero, De Officiis, Book I, by F. E. Rockwood, Bucknell University.

Cicero's Second Philippic, by E. G. Sihler, New York University.

Caesar's Gallic War, **Virgil's Aeneid**, and a new **Latin Exercise Book** will soon be added to the Preparatory Series.

Standard Literature Series

No. 46. **Grandfather's Chair**, Hawthorne. A historical narrative of unusual interest for boys and girls. Numerous illustrations appropriate to the story.

No. 47. **The Courtship of Miles Standish and Other Poems**, Longfellow. Thirty-three complete poems. With biographical and critical introduction by Professor Wauchope. Illustrated.

No. 48. (July) will be **Some Famous Poets**. Poems of Goldsmith, Gray, Burns, Cowper, Wordsworth.

Maury's Elementary Geography

Revised and enlarged. 120 pages. Study begins at pupil's home. The earth as a unit and as the home of man. Homes and peoples in color, full pages. Colored continental relief maps. The numerous illustrations from photographs. Each picture teaches a definite idea.

University Publishing Co.

NEW YORK BOSTON NEW ORLEANS

NEW GEOGRAPHIES

The Rand-McNally Geographies have been revised by Professor Charles R. Dryer of the Indiana State Normal School. There are ninety pages of new matter, many new maps and illustrations and a special section on "The Industries of the United States."

Why not examine them?

THE HOLTON PRIMER

"LIGHTS TO LITERATURE SERIES"

By M. Adelaide Holton

Supervisor of Primary Schools, Minneapolis, Minn.

Cloth, 112 pages.

For introduction, 25 cents

The Holton Primer is the most attractive of them all. Please accept my congratulations upon what in my opinion is the best primer now on the market.

Rock 1. Ill., Aug. 12, 1901.

H. B. HAYDEN,
Supt. of Schools.

Lights to Literature Readers

For nearly a year we have been using your "Lights to Literature Readers." The good opinion I formed of them at the outset has been strengthened month by month. At first our teachers were afraid that the books were "too hard for the grade," but this fear has now entirely disappeared. The selections are so attractive and have so strong an inherent interest that the children are led to attack all difficulties bravely and to conquer them easily. Our teachers are now unanimous in praising the series.

WM. M. LAWRENCE, Principal,
The Ray School, Chicago.

RAND, McNALLY & CO., Publishers

CHICAGO NEW YORK

GOOD MAPS

Good maps are necessary to good teaching. Our maps are of that kind. If you are thinking of buying maps or globes to assist you in your teaching of Geography, History and allied subjects, why not get the best and latest?

Our illustrated catalogue will tell you about our new maps and new editions. It can be had for the asking.

RAND, McNALLY & CO., Publishers

CHICAGO NEW YORK

Cambridge Educ P. 1

THE REVIEW OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. No. 3.
WHOLE NUMBER 65.

CHICAGO, OCTOBER, 1901.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

From Here and There.....	81
The Ideal School as Based on Child-Study, Dr. G. Stanley Hall.....	88
Bardeen-Barnard	94
Science of Education, Its Present Aspect and Outlook, Prof. Francis W. Parker	95
The Doctrine of Election, Henry Sabin.....	100
Literature in the Schools, A. B. Dick.....	102
Teaching Geography, Dr. G. Stanley Hall.....	103
The Educational Value of the Exposition, Dr. Nicholas Murray Butler.....	103
The Blue Bird.....	106
The Goldfinch.....	107
Work and Play in the Grades, Charlotte H. Powe	108
Work and Play in Adolescence, Prof. M. V. O'Shea	108
Ideal Public Schools, Dr. Andrew S. Draper.....	110
What are Fads? Supt. W. A. Whiting, Supt. F. Louis Soldan, Prof. William K. Fowler.....	112
The Movement for Museum Extension, Richard Waterman.....	115
Book Reviews	118
Educational Articles in the October Magazines.....	120

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

Branch Office, 1135 Broadway, New York

Entered at Chicago Post Office as Second Class Matter.

Colored Supplement, Blue Bird and Goldfinch, with this number.

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago, Ill.

Branch Office: 1135 Broadway, New York.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$3.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33% per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

A B C Book of Birds

for children large or small

BY

MARY CATHERINE JUDD

with nonsense rhymes for little ones
and prosy sense for older ones.

26 colored plates. Ready Nov. 1.
Price, \$1.00. Orders received in advance of publication, 75 cents.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

A. W. MUMFORD, Publisher,
203 Michigan Avenue, Chicago

The Jingle Book of Birds

By EDWARD B. CLARK.

16 Colored Plates. Ready Nov. 1. Price, 50c.

Orders received in advance of publication, 35 cents.

This book of jingling bird verse with its 16 colored plates of beautiful and characteristic birds will be certain to capture the children and to hold the attention and interest of the elders. The author is well known to bird lovers throughout the United States by his field sketches of bird life. Mr. Clark, in selecting the birds which are to illustrate his verse was careful to choose only those whose names, plumage and characteristics are such as to lend themselves readily to the motive of the verse. The lines are not jingles merely but jingles which have a well rounded purpose and much of pith and point. The color scheme of the cover of The Jingle Book of Birds will be strikingly beautiful. The younger ones, and the older ones, too, for that matter, will be delighted with this book for a Christmas gift. The author is intimately known to thousands of readers by the articles from his pen which have appeared several times a week on the editorial page of the *Record-Herald* for a long time past.

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago.

The Psychology of Childhood

By FREDERICK TRACY,

Lecturer in Philosophy in the University of Toronto.

With Introduction by PRESIDENT G. STANLEY HALL, of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

Send for complete descriptive list of Heath's Pedagogical Library, 37 volumes.

D. C. HEATH & CO., Publishers

Boston

New York

Chicago

THE JOURNAL OF CHILDHOOD AND ADOLESCENCE

A QUARTERLY MAGAZINE
DEVOTED TO SCIENTIFIC
CHILD-STUDY. \$1 A YEAR.

ALBERT H. YODER,
Editor.

Professor of Pedagogy, University of Washington.

It is to be hoped that those interested in the various phases of Child-Study and who wish to see such a magazine maintained, will send \$1.00 for the present volume. A sample copy will be sent for 10 cents—none free.

IF NOT A SUBSCRIBER

To AMERICAN EDUCATION

Then let us send you a sample copy at once. A postal card addressed to us will bring you a free copy by return mail. If you give our magazine a trial you will be convinced of its superior merits. To both new subscribers and old subscribers to AMERICAN EDUCATION who renew, we make these offers:

American Education	\$1.00	} All for \$2.75
Review of Reviews (new subscribers only) ..	2.50	
Success	1.00	
Rand, McNally & Co.'s Atlas .....	.50

American Education	\$1.00	} All for \$2.25
Teachers' World	1.00	
Success	1.00	
Rand, McNally & Co.'s Atlas .....	.50

Popular Educator, Primary Education, School Bulletin, or American Primary Teacher may be substituted for the Teachers' World.

American Education	\$1.00	} All for \$2.25
Rand, McNally & Co.'s Atlas .....	.50
Success	1.00	
Cosmopolitan	1.00	


Frank Leslie's Popular Monthly, The Household, Good Housekeeping, or The Designer may be substituted for the Cosmopolitan.


ORDERS MUST BE SENT DIRECT TO THIS OFFICE.

New York Education Co.,

81 Chapel St., Albany, N. Y.

THE TEACHER'S TOOL-CHEST

 No mechanic could get employment as a skilled workman unless he possessed a well-stocked Tool-Chest. Let this catalogue be kept at hand for reference when you find that you need tools in your trade.

 Those starred (*) are published in The Standard Teachers Library, and may also be had in manilla at 50 cts. each. Those marked with two stars (**) are in cloth, but may also be had in paper at 15 cts. Those marked with a dagger (†) have been chosen by the State Superintendent for the New York State School Library. Those preceded by (T) are specified for use in New York training classes.

Subscribers to *Birds and Nature* or *Review of Education* may order books except *Well's Writing Books*

from this list at 33 1/3 % discount and they will be sent prepaid.
Send all orders to :

A. W. MUMFORD, 203 Michigan Ave., Chicago, Ill.

Books of Reference

(T) *Sonnenschein's Cyclopaedia of Education*, \$3.75.

Knott's Ready Reference Law Manual, \$2.00.

Bardeen's Verbal Pitfalls, 75 cts.

Lawrence's Classified Reading, \$2.00.

The History of Education

† *Williams's History of Modern Education*, \$1.50.

*† *Quick's Educational Reformers*, \$1.00.

Bardeen's Dictionary of Educational Biography, \$2.00.

— *Note Book of the History of Education*, 50 cts.

† *Mark's History of Educational Theories in England*, \$1.25.

Bremner's Education of Women in Great Britain, \$1.50.

Bennett's History of Pedagogics, 50 cts.

Browning's Short History of Education, 50 cts.

Hallmann's Sketches from History of Education, 20 cts.

Uniform Questions in History of Education, 25 cts.

† *Donaldson's History of Education*, \$1.00.

Lane's Elementary Greek Education, 50 cts.

† *Cadet's Port Royal Education*, \$1.50.

Milne's Teachers Institutes, Past and Present, 25 cts.

Grant's Burgh Schools of Scotland, \$3.00.

Stevens's High School of Edinburgh, \$2.00.

Barbera's Educational Publications in Italy, 25 cts.

Bardeen's Educational Journalism in New York, 40 cts.

— *Educational Journalism—an Inventory*, 25 cts.

Smith's Schools of Syracuse, N. Y., \$3.00.

Descriptions of School Systems

† *Zimmer's Methods of Education in the United States*, \$1.00.

Page's Graded Schools in the United States, \$1.00.

Bramwell's Training of Teachers in the United States, \$1.25.

Burstell's Education of Girls in the United States, \$1.25.

*† *Bardeen's Roderick Hume, the New York Teacher*, \$1.25.

— *† *Commissioner Hume, a story of N. Y. Schools*, \$1.25.

*† *Riddle's Nicholas Comenius, ye Pa. Schoolmaster*, \$1.50.

*† *Grasby's Teaching in Three Continents*, \$1.50.

State Education for the People, \$1.25.

Bennett's National Education in Europe, 15 cts.

Arnold's Reports on English Schools, \$2.00.

A Day of my Life at Eton, \$1.00.

† *Parsons's Prussian Schools*, \$1.00.

— † *French Schools*, \$1.00.

Biographies of Noted Educators

Bardeen's Dictionary of Educational Biography, \$2.00.

*† (T) *Quick's Educational Reformers*, \$1.00.

Hallmann's Luther, Bacon, Pestalozzi, Pére Girard, Diesterweg, and Froebel, 20 cts.

*† *Carlisle's Memoirs of Ascham and Arnold*, \$1.00.

Meiklejohn's Life of Dr. Andrew Bell, \$1.00.

* *George Birkbeck, Pioneer of Popular Education*, \$1.50.

† *Harris's Horace Mann*, 50 cts.

Monroe's Henry Barnard, 50 cts.

Portrait of Edward A. Sheldon, for framing, \$1.00.

John Amos Comenius

Portrait of Comenius, for framing, \$1.00.

*† *Laurie's Life and Works of Comenius*, \$1.00.

The Orbis Pictus of John Amos Comenius, \$3.00.

Butler's Place of Comenius in Education, 15 cts.

Maxwell's Text-Books of Comenius, 25 cts.

Quick's John Amos Comenius, 15 cts.

Life and Works of Pestalozzi

Portrait of Pestalozzi, for framing, 25 cts.

*† *DeGulm's Pestalozzi: his Aim and Work*, \$1.50.

† *Pestalozzi's How Gertrude Teaches her Children*, \$1.50.

— *† *Letters on Early Education*, \$1.00.

† *Rooper's Object Lessons, or Words and Things*, 50 cts.

Hoose's Pestalozzian Arithmetics, Parts I, II, \$1.00.

Froebel and the Kindergarten

Portrait of Froebel, for framing, 25 cts.

† *Autobiography of Friedrich Froebel*, \$1.50.

Letters of Friedrich Froebel, \$1.50.

Hanschmann's The Kindergarten System, \$2.00.

† *Shirreff's Kindergarten System*, \$1.00.

† *Essays on the Kindergarten*, \$1.00.

† *Marenholz-Buelow's Child and Child-Nature*, \$1.50.

† *Perez's First Three Years of Childhood*, \$1.50.

† *Hallmann's Primary Helps*, 75 cts.

— *The New Education, Vol. VI*, \$2.00.

Meiklejohn's The New Education, 15 cts.

Kriege's The Child and Child Nature, \$1.00.

School Law

* *Bardeen's Manual of Common School Law*, \$1.00.

Johnson's School Law for Training Classes, 50 cts.

Uniform Questions in School Law, Answered, 25 cts.

Code of Public Instruction, New York, \$2.50.

Marble's Powers and Duties of School Officers, 15 cts.

State Education for the People, \$1.25.

Harris's General Government and Education, 15 cts.

Canfield's Rural Poor and Higher Education, 15 cts.

Northrop's High Schools, 25 cts.

Emerson's Latin in High Schools, 25 cts.

Bardeen's Effect of College-Preparatory High School upon

Attendance and Scholarship in Lower Grades, 15 cts.

— *Continuous Contracts for Teachers*, 50 cts.

— *Taxpayer and the Township System*, 25 cts.

— *Problems of City School Management*, 25 cts.

Denominational Schools, Discussion of 1890, 25 cts.

Cooper's Compulsory Laws and Enforcement, 15 cts.

Miller's Education as a Department of Government, 15 cts.

The Bible in the Public Schools, \$1.00.

† *Karoly's Dilemmas of Labor and Education*, \$1.00.

The Teacher and His Qualifications

Ballard's Arrows, or Teaching a Fine Art, 75 cts.

Bardeen's Teacher as he Should Be, 25 cts.

— *Teacher's Commercial Value*, 25 cts.

— *Teaching as a Business for Men*, 25 cts.

— *† *Teaching as a Business, Four Addresses*, \$1.00.

— *Continuous Contracts for Teachers*, 50 cts.

— *† *Roderick Hume, the Story of a N. Y. Teacher*, \$1.25.

— *† *Commissioner Hume, a Story of N. Y. Schools*, \$1.25.

*† *Riddle's Nicholas Comenius, ye Pa. Schoolmaster*, \$1.50.

Sheely's Anecdotes and Humors of School Life, \$1.50.

Ellis's Tales Told out of School, \$1.00.

Hooper's Fifty Years in the Schoolroom, \$1.00.

*† *Northend's The Teacher and the Parent*, \$1.00.

Blodgett's Relation of a Principal to the Community, 25 cts.

*† *The Teacher's Mentor*, \$1.00.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

- *† The Teacher's Critic, \$1.
- *† The Teacher's Guide to Correct Speech, \$1.00.
- * Helps to Self Culture, \$1.00.
- *† Huntington's Unconscious Tuition, 30 cts.
- Hinsdale's Pedagogical Chairs in Universities, 15 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- Gray's Methods and Courses in Normal Schools, 15 cts.
- † Thomas's Dictionary of University Degrees, \$1.00.
- Smith's Honorary Degrees in Colleges, 15 cts.
- † Kay's Education and Educators, \$2.00.
- Sabin's "Organization" vs. Originality, 15 cts.

The Science of Education

- *† (T) Herbert Spencer's Education, \$1.00.
- † Herbert's Lectures and Letters on Education, \$1.75.
- *† Rein's Outlines of Pedagogics, \$1.25.
- ☞ The standard text-book of the Herbartian system.
- † Cooper's "A Pot of Green Feathers", 50 cts.
- ☞ A popular presentation of Herbartian principles.
- Spinoza's Amendment of the Intellect, \$1.00.
- * Patrick's Elements of Pedagogics, \$1.00.
- Williams's Outlines of Psychology, 75 cts.
- (T) Payne's Science and Art of Education, \$1.00.
- *† Tate's Philosophy of Education, \$1.50.
- Uniform Questions in Philosophy of Education, Answered, 25 cts.
- Hinsdale's Schools and Studies, \$1.50.
- Harris's Theory of Education, 15 cts.
- Milton's Small Tractate of Education, 15 cts.
- Harris's Pedagogical Investigation, 15 cts.
- Marenholz-Buelow's School Workshop, 15 cts.
- Gaines's Principles in Teaching, 20 cts.
- Maudsley's Sex in Mind and Education, 15 cts.
- *† Huntington's Unconscious Tuition, 30 cts.
- Education as Viewed by Thinkers, 15 cts.
- Beesan's Spirit of Education, \$1.25.
- Mill's Inaugural Address at St. Andrews, 25 cts.
- Craig's Philosophy of Training, \$2.00.
- Minutes of the International Congress, 1884, \$5.00.
- † Kay's Education and Educators, \$2.00.

Child Study

- McMillan's Early Childhood, \$1.25.
- † Grossmann's Manual of Child Study, 50 cts.
- † Perez's First Three Years of Childhood, \$1.50.
- Tiedemann's Record of Infant Life, 15 cts.

School Management

- *† (T) Landon's School Management, \$1.50.
- * Buckham's Handbook for Young Teachers, 75 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- *† Page's Theory and Practice of Teaching, \$1.00.
- *† DeGraff's School Room Guide, \$1.50.
- DeGraff's Primer of School Management, 25 cts.
- Batsdorf's Management of Country Schools, 20 cts.
- Gill's Method and School Management, \$1.00.
- Housel's Method of Graded Examinations, 50 cts.
- Wells's Graded Schools, \$1.00.
- Uniform Questions on School Management, Answered, 25 cts.
- Marwell's Examinations as Tests for Promotion, 15 cts.
- Richardson's Learning and Health, 15 cts.
- Maudsley's Sex in Education, 15 cts.
- Sabin's "Organization vs. Individuality", 15 cts.
- Kotelmann's School Hygiene, \$1.50.

The Art of Teaching

- Fitch's Lectures on Teaching, \$1.25.
- † Fitch's Art of Questioning, 15 cts.
- † Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Hughes's How to Secure and Retain Attention, 50 cts.

- Hughes's Mistakes in Teaching, 60 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Southwick's Quiz Book on Theory and Practice, \$1.00.
- Dime Question Book on Theory and Practice, 10 cts.

School Discipline

- Wickersham's Discipline as a Factor, 50 cts.
- Kennedy's Philosophy of School Discipline, 15 cts.
- Aids to School Discipline, per box, \$1.25.
- Penniman's Suggestions in School Government, 15 cts.
- Briggs's Boys as they are Made, 25 cts.
- Lytleton's Mothers and Sons, the Problem of Home Training, \$1.50.
- Sedgwick's Talks with my Pupils, \$1.00.

Courses of Study

- Emerson's Latin in High Schools, 25 cts.
- Kennedy's Must Greek Go? 50 cts.
- Lees's The Claims of Greek, 25 cts.
- Comfort's Modern Languages in Education, 50 cts.
- Pattee's Literature in the Public Schools, 20 cts.
- Bardeen's Effect of College-Preparatory School, 15 cts.
- McCosh's Essays on Higher Education, 75 cts.
- Northrop's High Schools, 25 cts.
- Canfield's Rural Poor and Higher Education, 15 cts.
- † Harris's Art Education, the true Industrial Education, 50 cts.
- Perrot's Art Teaching in High Schools, 50 cts.
- Gray's Courses of Study in Normal Schools, 15 cts.
- Hinsdale's Pedagogical Chairs in Colleges, 15 cts.
- Harris's University and School Extension, 15 cts.
- Melklejohn's The New Education, 25 cts.
- Straight's Aspects of Industrial Education, 15 cts.
- Briggs's Industrial Training in Reformatory Institutions, 25 cts.
- Marenholz-Buelow's School Work-Shop, 15 cts.
- The Bible in the Public Schools, \$1.00.
- Hinsdale's Schools and Studies, \$1.50.
- Beck's Graded Question Book, \$1.00.

Methods of Teaching

- Hoose's Province of Methods in Teaching, \$1.00.
- † Fitch's Lectures on Teaching, \$1.25.
- *† DeGraff's School Room Guide, \$1.50.
- *† Page's Theory and Practice of Teaching, \$1.00.
- Lilley's Second Year in School, \$1.00.
- Gowdy's Ideals and Programmes, 75 cts.
- Eclectic Manual of Methods, \$1.00.
- Van Wie's Methods in Common Branches, 75 cts.
- Development Helps, 50 cts.
- Dickinson's Limits of Oral Teaching, 15 cts.
- Barnard's Oral Training, 75 cts.
- † Hughes's Mistakes in Teaching, 50 cts.
- † How to Secure and Retain Attention, 50 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Art of Questioning, 15 cts.
- Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- Fitch's Lectures on Teaching, \$1.25.
- Kiddle's How to Teach, a Manual of Methods, \$1.00.
- Lind's Methods of Teaching in Country Schools, \$1.00.
- Hart's In the School Room, \$1.00.
- Bates's Methods of Teachers Institutes, 75 cts.
- Fowle's Teachers Institute, \$1.00.
- Uniform Exam. Questions on Methods, Answered, 25 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Bryant's Teaching of Morality in the Schools, \$1.00.

Natural Science

- Wilson's How to Study Nature in Elementary Schools, 50 cts.
- Gager's Current Errors in Science Teaching, 50 cts.
- † Harris's How to Teach Natural Science, 50 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

MIDLAND

UNIVERSITY

CHICAGO AND DIXON, ILL.

LAW The freshman year's study in the Chicago Law School gives a complete preparation for business life, and prepares for advanced standing, leading to degrees of LL.B., and LL.M., and prepares for admission to the Bar in all the States.

MEDICINE The major subjects are studied during the first year, so that the student can take advanced standing in any medical college leading to degree of M. D.

DENTISTRY The first year's work prepares the student for the laboratory in technical and operative work; the second and third years' study leading to degree of D.D.S.

PHARMACY The general subjects of Pharmacy are Chemistry, Botany, Microscopy and others; prepares the student for the second year and the State Board of Examination leading to degree of Ph. C.

FULL BUSINESS COURSE Including Bookkeeping, Business Correspondence, Business Arithmetic, Business Forms, Business Penmanship, Actual Business and Office Work, Shorthand and Typewriting Course; the Elective system of Shorthand is taught, simplest, most easy of acquirement and the most rapid system extant.

NORMAL COURSE Leading to degree of B. Ed., and fitting for examination for Second Grade, First Grade and five-year State Certificate.

CLASSICAL COURSE Leading to the degree of A. B., and bringing the student into possession of a breadth of culture that is indispensable in a literary and professional life.

A COURSE IN SCIENCES The complete course comprehends Physics, Botany, Zoology, Geology, Astronomy, Physiology, Anatomy, Mineralogy, Algebra, Geometry, Higher Mathematics, Latin and German; leading to B. S. degree, to examination for a teacher's five-year or life certificate.

∴ UNIVERSITY EXTENSION ∴

HOME STUDY COURSES in "Correct English," Law, Literature and History, Latin, Greek, Hebrew, French, German, Elementary Sciences, Philosophy, Ethics, Aesthetics, and Logic, Political Science, Political Economy, Sociology. *Students may enter the regular University Courses at any time and receive credit for work in any of the above courses.* Extension courses lead to B. S., Ph. B., Lit. B., Ph. D. Laboratory work, comparative study, class-quizzes and lectures, under supervision of specialists, for advanced students. *Special opportunities are offered at the Summer Seminar; courses are organized for this special work which continue from six to sixty days.*

Board and room in private family \$2.50 to \$3.00 per week. Club rate for 50 to 100, \$1.25 to \$1.50 for table board. For information for the courses, address

J. J. TOBIAS, Chancellor, 115 Dearborn St., Chicago.

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? **Telegraph.**—To *Principal W. B. Carhart*, Coeymans, N. Y., March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart*, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To *President Smiley*, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley*, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To *Mr. Carhart*.

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart*, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To *Mr. Carhart*, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart*, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To *President Smiley*, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart*, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To *Mr. Carhart*, March 27.

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

Birds of Song and Story

By ELIZABETH and JOSEPH GRINNELL

16 Colored Plates. Ready Nov. 1. Price, \$1.00.
Orders received in advance of publication, 75 cents.

These authors are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of out door study for many years but they have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends. The habits of every feathered friend of the dooryard and of the deep woods are known to Mr. and Mrs. Grinnell just as intimately as are the legends and the folklore of other ages touching the same bird. The title "Birds of Song and Story," is an eminently fitting one for the book, for in a few words it describes thoroughly its scope. There is a charm about the writings of both these authors that will appeal strongly to all lovers of good literature and especially strongly to all who love at once to read the printed page and the book of nature. Artistically, "Birds of Song and Story" will be made as nearly perfect as it is possible that any book may be.

A. W. MUMFORD, Publisher

203 Michigan Ave.

Chicago

NEW YORK

ADOPTION.

"I beg to advise you that a contract has been awarded to you by the Board of Education."

A. E. PALMER, Sec'y of Board,
New York.

The above reference is to the first three volumes of our BIRDS AND NATURE and also the 168 loose pictures illustrating them. These books and pictures are not only adopted for use in the school libraries of New York, but are extensively used in schools everywhere. The first three volumes adopted contain 168 exquisite pictures of birds in natural colors produced by color photography. The list price per volume in cloth is \$1.50, the special price, \$1.15. Loose pictures assorted as desired, 2 cents each, in sets of 168, \$1.75. Address

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago,
1135 Broadway, New York.

Greatest of all Tonics

Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—
Invigorates the Entire System.

The Young Idea

Is a Study in Story
of the Living World.

Who will say that the story is not a factor in education? Fascinating facts told in choice language make a deep and lasting impression. We can grasp but one thought at a time; for this reason all our articles are short, and embrace one live subject; yet not too short to be choppy. Thousands of teachers and pupils read "The Young Idea" every month. It is a Magazine of Character, Study, Travel, Field Observations in Nature, and questions of the hour. Price, 50c a year; 30c in club lots. For \$1.50 we will send eleven copies five months. Correspond with

JAMES E. HUGHES

4 Ashburton Place, Boston, Mass.

GOOD MAPS

are necessary to good teaching. Our maps are of that kind. If you are thinking of buying maps to assist you in your teaching of Geography, History and allied subjects, why not get the best and latest maps made?

Our illustrated catalogue will tell you about our new maps and new editions. It can be had for the asking.

Rand, McNally & Co.,
PUBLISHERS.

Chicago.

New York.

WILLIAM MCKINLEY,

HIS LIFE AND WORK,

BY

Gen. Charles H. Grosvenor.

President's life long Friend, Comrade in war and Colleague in Congress. Was near his side with other great men when his eyes were closed in death. Followed the bier to the National Capitol and to Canton. The General requires a share of the proceeds of his book to be devoted to a McKinley Monument Fund. Thus every subscriber becomes a contributor to this fund. Millions of copies will be sold. Everybody will buy it. Orders for the asking. Nobody will refuse. Elegant Photogravure Portrait of President McKinley's last picture taken at the White House. You can easily and quickly clear \$1,000 taking orders. Order outfit quick. Chance to prove success, secure yearly contract and become Manager. Outfit free. Send 10c in stamps to pay expense of wrapping, packing and mailing elegant prospectus. Taking 10 to 50 orders daily. 50,000 copies will be sold in this vicinity. Address,

THE CONTINENTAL ASSEMBLY,

Corcoran Bldg., Opp. U. S. Treasury,
Washington, D. C.

BIRDS OF LAKESIDE AND PRAIRIE

By EDWARD B. CLARK.

16 Colored Plates. Ready Nov. 1. Price, \$1. Orders received in advance of publication, 75 cents.

THIS book will contain field sketches of bird life in the great middle west. Mr. Clark for years has been a close student of nature in a section of the country where wild bird observers have been many and bird writers have been few. The author takes his readers afield with him and puts them in close touch with our feathered friends of lakeside, woodland and prairie. The bird byways of Illinois, Indiana, Michigan, Wisconsin and other great middle western states are thoroughly explored. Mr. Clark is known to the reading public through his many bird articles which have appeared in the Chicago Tribune, and in the different magazines of the country. He is perhaps still more intimately known to middle western readers by the articles from his pen which have appeared several times a week on the editorial page of the Chicago Times-Herald, now the Record-Herald. The colored illustrations in "The Birds of Lakeside and Prairie" will be from our colored plates slightly reduced in size. Mr. Clark's work is characterized by a fine literary style.

A. W. MUMFORD, Publisher.

203 MICHIGAN AVE.,

CHICAGO.

The Review of Education.

VOL. VII.

CHICAGO, OCTOBER, 1901.

No. 3.

FROM HERE AND THERE.

We may endure politics (as we misname waste and corruption in municipal affairs) in our city halls, and say broadly that we can measure the evil in dollars. Not so as to the administration of the public schools. Corruption there means not only waste; it means poison; it means that the very sources of our citizenship are rendered putrid. We may pay for good streets, lights, sewers, water, and police service, and get bad streets, lights, sewers, water, and police service, because of inefficient or corrupt administration; and yet the body social and politic may remain fairly wholesome and thriving. We may not permit either inefficiency or corruption to taint the administration of our public schools without finding that the whole theory of free public school education as one of the main reliances of "government of the people, by the people, for the people," has utterly failed.

The function undertaken to be performed by these schools is the most important of all the activities of our municipal government. This is true even from the point of expenditure. In Boston, for the year ending January 31, 1900, out of payments from regular department appropriations of \$12,919,483.23, the school committee had \$2,813,455.22, while the street department, the next most expensive, had \$2,117,146, and the police department, the third in order, had \$1,640,510.83. No argument is necessary to show that it is more important to have good teachers than it is to have good street builders or good policemen.

If, as has been so often said, free public

schools lie at the very base of enduring democratic institutions, it is not enough merely to furnish these schools; the attendance must also be general, especially the attendance of the children of the better classes,—of those who have some legitimate claim to social standing. The public schools can never do their proper and essential work in a democratic society if the public school teachers, as a class, fail to command intellectual and social respect. Their social status is nearly as important as their educational efficiency. It is obvious that if public school teachers are, or are supposed to be, the creatures and appointees of politicians of the class who have been so prominent in the administration of our larger cities; if intelligent and conscientious parents become imbued with the idea that the teachers in these schools are there, not because of their intellectual merit and moral character, but because of willingness to assist in the political advancement of the class who have constituted so large a part of our boards of aldermen and common councils, an exodus is certain to follow; the schools will cease to be really public schools. It is not enough that the schools should remain fairly good, and the great majority of the teachers conscientious and reasonably efficient; the very appearance of evil must be avoided.—*George W. Anderson in The Atlantic.*

Professor Tufts, of the University of Chicago, in an address before the senior class of that institution, has expressed a fear that the university may develop into

a kind of normal school. "Of all the young men and women who have graduated from the university," said Professor Tufts, "about one-half are engaged in teaching." This condition of affairs Professor Tufts regards as undesirable. He thinks that the university should prepare men and women for the active struggles of business and professional life. He is sorry to see that so many graduates show a preference for academic pursuits. He is afraid that the university will come to be regarded as a mere fitting school for teaching positions and not as the alma mater of successful lawyers, physicians, clergymen, and financiers.

This fear is perhaps well grounded. It would be unfortunate, indeed, if the university should forsake its wide mission as an epitome of all professions and occupations and of all possible human activities and should confine itself to the narrow field of training men and women for the office of teaching. The university should have a more vital connection with the actual life of the age. The training of the young is no doubt an important function of society, but that a university should send half of its graduates into that profession seems an unfortunately one-sided development.

From another point of view, however, the drift toward teaching is not altogether a matter of regret. The majority of the young teachers go of necessity into high schools. And that high school teachers should have a college education hardly admits of denial. The efficacy of our high schools will be greatly increased when the teachers have the benefit of college training. Especially in the country the preparation of most teachers is at present lamentably deficient. No one will be sorry to see college graduates taking the places of their inadequately instructed rivals. The effect upon the community will be good. But at the same time one cannot help hoping that college instruction will be of such a kind as to leave its recipients with the feeling that they are prepared to do other things besides pass on the knowledge they have acquired.—*Exchange*.

Edward Howard Griggs in an article on "The Education of a Child from Elev-

en to Eighteen," published in the *Ladies' Home Journal*, says:

"The child who runs for a day over an ocean ship has laid in a store of observations worth more than much teaching of mechanical invention and means of transportation. A few weeks spent in making a little garden, planting seeds, caring for the tender growth, gathering and utilizing such produce as may come, will bring the child nearer to the great Nature-mother than much school work and even many excursions for Nature-study. It is play, work, love, that educate: spontaneous self-expression, action compelled by inner or outer forces, relations to other individuals.

"Yet it is true that where one child has the interest and opportunity to run about an ocean steamer, a thousand children never see one. While one child may have a garden, the waifs and victims of the city can only see flowers hedged in by iron railings, and often guarded by a green expanse with its signs warning them to keep away. It is indeed this limitation of experience that justifies our attempts at conscious education. It is because we cannot wait for Nature and accept the chances of experience, because life is brief and the individual must start with the capital of other lives, that we need to assist and supplement Nature in developing the individual.

"Our task would be comparatively easy if the development of personality proceeded in a straight line—if it were such a process as could be represented by a step-by-step advance in one direction. But this is exactly what is never true. Growth is most irregular. Now one element springs suddenly into active being, and now another. A brief time of rapid advance is apt to be followed by a long period when the elements unfolded may have time quietly to establish themselves. In Dr. Oppenheim's study of "The Development of the Child" these irregularities in physical growth are brought out in the clearest fashion; but our interest lies in the fact that the same law holds completely with reference to mental and moral development."

The London chamber of commerce has completed preparations for a vigorous winter campaign in the interests of high-

er commercial education. Nearly 200 evening lectures on business topics have been arranged for city clerks and school teachers. Spanish, French and Italian chambers of commerce are co-operating with the London chamber of commerce in the organization of modern language classes and are offering prizes for the most successful students.

Some of the most prominent business men of England are among the lecturers. For example, Sir Robert Giffen is to lecture on "Foreign Exchange"; Col. Henry M. Hozier, chairman of Lloyds, is to lecture on "Marine Insurance"; the chairman of the London stock exchange is to lecture on "The Telegraphic Lines of the Empire." Kenric B. Murray, secretary of the chamber of commerce, said to-day to the correspondent of *The Daily News*:

"The commercial education provided by the schools is usually inefficient and sometimes it is entirely absent. We have invited the teachers of the London board school to attend the lecture classes in the hope of remedying this condition.

"We desire to establish a high standard of examination providing assurances to holders of our certificates of being thoroughly competent. The Spanish chamber of commerce has outlined a course of the most comprehensive character, providing not only for a general knowledge of the language, but for special acquaintance with commercial terms. Students passing in this course will be qualified to represent English houses in Spanish speaking countries or Spanish houses in England.

"English merchants are awakening to the importance of higher commercial education which will permit of their employing our students in preference to foreigners."—*The Chicago Daily News*.

The death of Professor Le Conte Saturday, July 6, 1901, in the Yosemite Valley, removes another scientist of the first rank from the roll of university teachers. The Le Conte family, with other exiled Huguenots, settled at New Rochelle, N. Y., rather more than two centuries ago. Five of the family, Professor Le Conte, his father, uncle, brother, and cousin, won distinction during the last century in

the cultivation of various branches of science. Professor Le Conte was born in Georgia in 1823, and after a few years devoted there to the practice of medicine he became a pupil of Agassiz at Harvard in 1850. Short terms of service as a teacher of science in three southern colleges from 1852 onward ended with his appointment in 1869 to the chair of Geology and Natural History in the University of California, which he held until his death. Professor Le Conte's scientific interest was many-sided. His numerous publications are concerned with geology, biology, optics, education, art, philosophy, theology, and aeronautics. Among his best known works are his "Elements of Geology" and "Evolution and its Relation to Religious Thought." Like his somewhat older contemporaries, the late Asa Gray, of Harvard, and James D. Dana, of Yale, Joseph Le Conte was no less thoroughly a Christian man than a man of science, and, like them, counted for much in clearing the air of doubts concerning the compatibility of science and religion. Indeed, to this day we know no better work for one to read who is thoughtful, studious, and perplexed by the incongruity between scientific and theological theories than "Evolution and Its Relation to Religious Thought." Others have since more fully developed his thought, but the germs of modern evolutionary theology are nearly all to be found in this unpretentious treatise.—*The Outlook*.

The election of the Hon. Charles R. Skinner for the third time as Superintendent of Public Instruction of the state of New York is the most satisfactory item of educational intelligence we have to chronicle at this time. During his six years as the chief educational officer of the state of New York, Mr. Skinner has met in every respect the requirements of an educational position that is easily the most responsible and most powerful in the United States. His unanimous election for a third term is a high honor, and it stands to the credit of the present legislature that the splendid record made by Mr. Skinner outweighed all political considerations in the choice of the head of the public school system of the Em-

pire state. In the administration of the educational affairs of the state, Mr. Skinner has at all times displayed signal ability as an executive, a clear insight into educational conditions, and unquestioned integrity. In entering upon his third term Mr. Skinner will have more fully than ever the loyalty and co-operation of the educational forces of the state, and it is safe to predict that the next three years will show a steady progress toward better things in educational thought and practice in New York. The election of Mr. Skinner for the third time will, we hope, become a precedent that will be more generally followed in New York and in other states than has been the case in the past. The two-term principle in the election of state superintendents and other educational officers chosen by the people is one of the most serious hindrances to educational progress we have to contend with, and the abolition of this custom ought to be brought about in all sections of the United States.—*Journal of Pedagogy*.

The movement now on foot in London to provide a new building for the Parkes Museum calls attention to the interesting character of that institution. It was founded twenty-five years ago for the teaching of sanitary science, and has come to have an important function in relation to practical sanitation in London and other parts of Great Britain. Indeed, some of its 2,500 members are found on every continent.

Its exhibits illustrate private and domestic hygiene as well as that of different trades and of public institutions. It deals with sanitation in respect to methods of construction, building materials, water supply, sewerage, heating, lighting, and ventilation. Builders and owners can there see not only a variety of sanitary appliances and study the qualities of different materials and processes with reference to sanitary results, but they can see precise examples of what is required by public regulations on these subjects.

The museum also carries on specialized investigations in sanitary science, has a valuable library and reading-room, and, perhaps most important of all, conducts courses of lectures calculated to prepare

sanitary inspectors and others dealing with sanitary questions for their duties. Some of its educational efforts are likewise directed toward preparing school teachers to give elementary instruction on these subjects.

The demand for such an institution as this in the modern city is obvious. It fills a place which is not and scarcely can be filled by public administrative agencies. A counterpart of the Parkes Museum would be a valuable institution in this or any other large American town.—*The Chicago Tribune*.

Bishop Henry B. Whipple, the senior bishop of the Protestant Episcopal Church of America, died September 16, at his home in Faribault, Minnesota. He was consecrated first Episcopal bishop of Minnesota in 1859 at Richmond, Virginia, and assumed the duties of this office soon after the admission of the territory to statehood.

"His claims to recognition were not based upon theological grounds, nor to eminence as a preacher, but rather on the broad foundation of humanity. He was best known for two things: First, for his great and steadfast friendship for the Indians; and, secondly, for the upbuilding of the Episcopalian institutions of learning at Faribault.

"His zeal and earnestness in behalf of the Indians was something pathetic. His first and last thoughts were always of the savages. Some years ago, while seriously ill and while grave apprehensions were felt as to his ultimate recovery, he sent a message to N. Megarge, then at White Earth agency, saying he was sick, and ordered the same instructions sent to the old chief, Wabashaw, at Redwood Falls. Not a word was said about the white clergyman; they seemed to have no part in his thoughts."

Dr. F. Smedley, a prominent apostle—or pope or something or other—of "child study," has made the tremendously important discovery that the average large pupil is brighter than the average small one. To reach this valuable conclusion the doctor examined over seven thousand pupils of the public schools. Just what he examined them on or in and how he

got his averages is not stated; but he got his conclusion, and that was doubtless what he went after.

But the question that is puzzling us is, what is he going to do about it? Does this discovery indicate that the small boy ought to be fattened up before starting him to school, or may we take it as authority for putting the large boy upon a course of "anti-fat" preparatory to sending him as grist to the public school mill? Does it mean that we should have separate schools for the fats and the leans, or only that we should put them upon different courses of study? The learned doctor should have enlightened us as to the point in his conclusion.

He should also have examined seven thousand men to let us know whether this relative mentality is a constant or a variable, and whether or not the average large boy has a tendency to grow up into the average small man and vice versa, or whether the bright boys make the dull men and the dull boys the bright ones; otherwise we are liable to get confused about such men as Napoleon, Pope, Goldsmith, Heine, Pestalozzi, Aristotle, Socrates, St. Paul, Shakespeare, Hawthorne, Hamilton, John C. Calhoun, Alexander Stephens and others.—*The Western Teacher*.

"Now, play is as much a need of the man's nature as of the boy's, and if work is to keep its freshness of interest, its spontaneity, and its productiveness, it must retain the characteristics of play; it must have variety, unconsciousness of self, joy. Activity it cannot lose, but joy too often goes out of it. The fatal tendency to deadness, born of routine and repetition, overtakes the worker long before his force is spent, and blights his work by sapping its vitality. Real work always sinks its roots deep in a man's nature, and derives its life from the life of the man; when the vitality of the worker begins to subside, through fatigue, exhaustion of impulse, or loss of interest, the work ceases to be original, vital, and genuine. . . . It is of the highest importance, therefore, that a man keep himself in the most highly vitalized condition for the sake of productiveness.

"No one can keep in this condition

without the rest which comes from self-forgetfulness and the refreshment which comes from joy; one can never lose the capacity for play without some sacrifice of the capacity for work. . . . The old delight of the playground must be called back by the man, and must be at the command of the man. The boy's play in a real sense creates the man: the man's play re-creates him by a revitalizing him, refreshing him and restoring to him that delight in activity for its own sake which is the evidence of fresh impulse.

"This is the true meaning of recreation; it involves that spiritual recuperation and reinforcement which restore a man his original energy of impulse and action. Recreation is, therefore, not a luxury, but a necessity; not an indulgence, but a duty."—*Hamilton W. Mabie in Work and Culture*.

Is it not a curious commentary on our outdoor habits that we are familiar with excursions where the participants go out botanizing, geologizing but we never hear of excursions for geographizing? Let us try to make the thing and the word more common ten years hence than it is now. Let us become accustomed to studying the geographical features of our home district; let us learn to carry maps on our railroad journeys; let us try to take the best advantage of our many geographical opportunities. Let us make geographizing a popular form of recreative study.—*Journal of School Geography*.

H. C. C., in a letter written to *The Outlook*, says:

In your issue of May 25 you credited Andrew Carnegie, on account of his offer of ten million dollars to the Scotch universities, with having given the largest amount ever contributed by any individual to the cause of free education.

This is a mistake. Some ten years ago Senator Leland Stanford and his wife devoted, not a part, but the whole of their large fortune to founding the Leland Stanford Junior University at Palo Alto, California, and since the senator's death this has been confirmed by Mrs.

Stanford, so that the trustees have now in their hands and subject to their administration property of the estimated value of thirty million dollars. Not all of this is productive, so it does not at present produce a revenue commensurate with its value, but it does yield, even now, in round numbers, six hundred thousand dollars per annum. Of this, four hundred thousand are applied to the expenses of the University, and the remainder to the gradual erection, on a well-considered and comprehensive plan, of what, when finished, will comprise as complete an outfit of university buildings as any in the world, fully equipped with the best of modern appliances. Great advance has already been made in these. The student roll is already about sixteen hundred. Tuition is absolutely free, there being no charges except the immaterial entrance fee of ten dollars and the usual small charges for material actually used by the students in some of the courses.

Any man who would ridicule our public schools or seek to depreciate the splendid work that the teachers are doing, is a person devoid of discernment and lacking in knowledge. The school teachers of America do more work for less pay than any other class of persons with equal intelligence that can be named. And the love, loyalty, patience and devotion shown in their work by many public school teachers is worthy of our highest esteem. And the teaching timber is continually improving—I know that. I am quite aware that the school room that does not now have many traces of beauty and attempts at harmony, is exceptional. I know, too, that patience and kindness are now to be found where once was force approaching brutality. The world is getting better.

However, the man who would say that the public schools of America approach perfection, has a very crude intellect. The teachers, for the most part, know this, but they are cabined, cribbed, confined by grocers, butchers, busy doctors and the lawyers who compose the school board. The "Board" very rarely contains a man who either thinks or feels. In fact, the only thing to which he usu-

ally responds is the crack of the party lash. * * * The salvation of the school lies in the fact that the average school trustee never visits the school at all, and knows blessed little about what is being done there. So while the trustee does not meddle, yet his ponderous inertia is there, and this has to be considered.—*Elbert Hubbard in The Philistine.*

"Our existing school system consists in lumping together masses of school children in what are called classes and stuffing into their heads collectively a quantity of knowledge based, not upon the individual bent of each child, but upon a fixed code and curriculum. The principle is to set forty or fifty children doing and thinking precisely the same thing. The result is inevitable. There is a top of the class and a bottom of the class. Those who reach the former are regarded as the clever ones; those who remain at the latter are looked upon as dunces. The classification is wholly unfair and grossly idiotic. All that it really reveals is the perniciousness of a system which creates stupid children by forcing upon their brains subjects for which they are not receptive. The fool of the Latin class might distinguish himself in natural history, but the pedagogue goes on stuffing him with syntax and grammar, regardless of the fact that his mind is absorbed in beetles, and that he never attends school without a pocketful of mice. Not only must this method of teaching 'en bloc' be abolished altogether, but teaching in itself, as we understand the term, should be rigorously avoided. Every encouragement ought to be given to pupils to think. There should be less reading and more reflection. The pernicious custom of learning by rote ought to be inscribed upon the penal code. Hanging would be too light a punishment for the teacher who destroyed the minds of his charges by making them commit 'Casabianca' to memory."—*Harold E. Gorst: Quoted in Current Literature.*

Jane A. Stewart in an article on the "Work of the National Educational Association," published in the *Normal Instructor*, writes as follows:

"One of the signs of the times is the

encouraging growth of the high school. In ten years, 1889-1899, the total enrollment has increased from 205,000 to 580,000, a percentage of increase far ahead of that of the population. Of all the section meetings, none has been so well attended as that of secondary education. There was earnest endorsement of the declaration of President G. Stanley Hall, that the high school should be made the dominant factor in education. Undoubtedly before long, as Superintendent Pease of Omaha affirmed, every high school will be compelled to recognize three elements of its work. There will be the traditional high school, with its academic work as of old, to give a somewhat liberal education; there must be a business or commercial side to the work, for this, more than anything else, is being called for; and there must be a manual training department. For business education no less than for general education, the hope of the masses centers in the high school. "In the normal department, the keynote was sounded for more education for coming high school teachers."

The *School Bulletin* has just completed its twenty-seventh year. This, of itself, is a sufficiently important event to invite comment. It has been edited, from the beginning, by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and the *Bulletin* is the New York *Sun* of school journals. Mr. Bardeen is the dean of the editors of school journals in America. He is the new president of the Educational Press Association. We

clip the following from the September number of the *School Bulletin*:

"It is customary to make a formal bow to one's readers when entering upon a new volume, but the editor of the *School Bulletin* has done it so often that the momentousness of the occasion is not oppressing. To issue a journal every month for twenty-seven years is something of a record, and for the same man to issue an educational journal for that period without a break is a record that has never before been made. Still there is fair prospect that the record will be considerably longer, and he will not take time to dwell upon it."

Mr. Cooley, Superintendent of Chicago schools, and his school management committee are now laying plans to weed out incompetent principals and unsatisfactory teachers. The teachers are very much pleased to know that the weeding out process is to apply to the principals as well as to themselves. Let the good work go on.

Dr. A. R. Taylor, president of Kansas State Normal School, has been elected president of the new industrial school at Decatur, Ill., with salary of \$5,000 a year. This institution was recently given nearly \$1,000,000 by James Milliken.

Superintendent F. H. Hall for the third time has been appointed superintendent of the School for the Blind at Jacksonville, Ill. This school has prospered under his management.

THE IDEAL SCHOOL AS BASED ON CHILD STUDY.*

BY DR. G. STANLEY HALL,
President of Clark University.

I shall try in this paper to break away from all current practices, traditions, methods, and philosophies, for a brief moment, and ask what education would be if based solely upon a fresh and comprehensive view of the nature and needs of childhood. Hitherto the data for such a construction of the ideal school have been insufficient, and soon they will be too manifold for any one mind to make the attempt; so the moment is opportune. What follows is based almost solely, point by point, upon the study of the stages of child development, and might, perhaps, without presumption be called a first attempt to formulate a practical programme of this great movement.

The school I shall describe exists nowhere, but its methods, unless I err, are valid everywhere. Although many of its features exist already, and could be pieced together in a mosaic from many lands and ages, it is essentially the school invisible, not made with hands. But as there is nothing so practical as the truly ideal, although my school today exists nowhere, it might be organized anywhere to-morrow.

Beginning with the deep philosophy often embedded in words, "school," or "schole," means leisure, exemption from work, the perpetuation of the primeval paradise created before the struggle for existence began. It stands for the prolongation of human infancy, and the no whit less important prolongation of adolescence. It is sacred to health, growth, and heredity, a pound of which is worth a ton of instruction. The guardians of the young should strive first of all to keep out of nature's way, and to prevent harm, and should merit the proud title of defenders of the happiness and right of children. They should feel profoundly that childhood, as it comes fresh from the hand of God, is not corrupt, but illustrates the survival of the most consummate thing in the world; they should be convinced that there is nothing else so

worthy of love, reverence, and service as the body and soul of the growing child.

Practically, this means that every invasion of this leisure, the provision of a right measure of which is our first duty to youth, has a certain presumption against it, and must justify itself by conclusive reasons. Before we let the pedagogue loose upon childhood, not only must each topic in his curriculum give an account of itself, but his inroads must be justified in the case of each child.

I. The kindergarten age is from two or three to six or seven. Here, before the ideal school can be inaugurated, we need some work of rescue from the symbolists. Now the body needs most attention, and the soul least. The child needs more mother, and less teacher; more of the educated nurse, and less of the metaphysician. We must largely eliminate, and partly reconstruct, the mother-plays, while transforming and vastly enlarging the repertory of the gifts and occupations. We must develop the ideal nursery, playgrounds, and rooms, where light, air, and water are at their best. The influences of the new hygiene have been felt least here, where they are needed most. The neglect of these basal principles suggests that we have still among us those whose practice implies a belief that any old place is good enough to hatch out beautiful souls, provided only Froebelian orthodoxy of doctrine and method is steadfastly maintained. In place of a magic mongering with them, the cubes, spheres, cylinder, and also the top, soap-bubble, doll, dances, marches, circus, and scores of other free plays and games; and in place of two or three fish, insects, animals, plants, several score must be provided, and a museum and *catalogue raisonne* of toys must be at hand. Eating bread, milk, fruit, with some simple table manners, and using paper napkins, sometimes do wonders for these human larvæ. Feeding brightens the minds and saves the disposition; a full stomach

*An abstract of an article printed in The Forum.

opens the mouth, and good courses of lessons could be derived from the viands themselves.

The kindergarten should fill more of the day, and should strive to kill time. Part of the cult here should be idleness and the intermediate state of reverie. We should have a good excuse to break into these, and at this age children should be carefully shielded from all suspicion of any symbolic sense. Thus in play and in play only, life is made to seem real. Imitation should have a far larger scope. Children should hear far more English and better, and in the later years the ear should be trained for French or German. Color should never be taught as such. The children of the rich, generally prematurely individualized or over-individualized, especially when they are only children, must be disciplined and subordinated; while the children of the poor, usually under-individualized, should be indulged. We should lose no syllable of the precious positive philosophy of Froebel, the deepest of all modern educational thinkers; but we must profoundly reconstruct every practical expression that he attempted of his ideas, and must strive to induce at least a few college-trained men and women to turn their attention to the kindergarten, thus making the training schools feel, what they have hitherto known so little of, the real spirit and influence of modern science. Teachers should study every child, not necessarily by any of the current technical methods. They should learn far more than they can teach, and in place of the shallow manikin child of books they should see, know, and love only the real thing. After this metempsychosis, the kindergarten should be, and should become, an integral part of every school system.

II. The age of about seven or eight is a transition period of the greatest interest for science. Then most children have less chewing surface by three or four teeth; there is a year or more of increased danger to the heart; the breath is shorter and fatigue easier; lassitude, nervousness, visual disorders, and cough are somewhat more imminent; and the blood is more often impoverished. The brain has practically finished for life its growth in weight and size; and all work and strain

must be reduced. Some important corner in its time of development, not yet fully understood, is turned.

III. At eight or nine there begins a new period, which, for nearly four years, to the dawn of puberty, constitutes a unique stage of life, marked off by many important differences from the period which precedes and that which follows it. During these years there is a decreased rate of growth, so that the body relatively rests; but there is a striking increase of vitality, activity, and power to resist disease. Fatigue, too, is now best resisted, and it is amazing to see how much can be endured. The average child now plays more games and has more daily activity, in proportion to size and weight, than at any other stage. It would seem, as I have proposed elsewhere with ground for the theory, as though these four years represented, on the recapitulation theory, a long period in some remote age, well above the simian, but mainly before the historic, period, when our early forebears were well adjusted to their environment.

However this may be, child nature suggests very plainly that this period should be mainly devoted to drill, habituation, and mechanism. The age of reason is only dawning, and is not yet much in order; but discipline should be the watchword here. Writing, and even reading, for instance, should be neglected in our system before eight, and previous school work should focus on stories, the study of nature, and education by play and other activities. Now writing and reading should be first taught with stress. Their nascent period is now beginning. If we teach them before, we are apt to make the average child a bad writer for life by precocious over-emphasis on the finer muscles. Modern studies show that the zigzag of the eye back and forth along the printed line is as dangerous as is the too early wigwag of the pen. At best the strain laid upon these tiny muscles is dangerous.

Verbal memory is now at its very best, and should be trained far more than it is. We are now educating the automatic bases of both mind and morals, and habits are never so easily formed or made stable. Manual training and games should be extremely diverse, manifold,

and thorough. It is the time to break in the human colt, which is by nature in some sense the wildest of all wild animals. If the piano or any other musical instrument is to be learned, this is the time for drill, especially on scales and exercises. Names, even technical ones, come now. Drawing, too, should now come into prominence, beginning in its large and perfectly free form before writing, and only near the end of the period becoming severely methodic and accurate. Art training should not result in intimidation, but first everything should be drawn—battles, fires, shipwrecks, and railroad accidents, with plenty of human figures and action, and no angles, straight lines, or regular curves, which have come very late in the history of the race. This would make drawing, as it should be, a real expression of the child's soul, and the child would copy what he, and not what the adult, sees.

The mother tongue will be the vehicle of nearly all the work of this period; but it will be on the short circuit from ear to mouth, which existed for unknown eons before writing or reading, and not chiefly on the long circuit and biologically very recent brain-path from eye to hand. Teachers praise written work in home and at school—compositions, essays, class work; but all these appeal to new and undeveloped powers of nerve and muscle. It is because we try to establish good English upon these foundations, so precarious at this stage, that we have so much and so just complaint of bad English. We ruin both handwriting and idiomatic speech by precocity. The child should live in a world of sonorous speech. He should hear and talk for hours each day; and then he would lay foundations for terse and correct English, and would keep read-writing, as it should forever be, subordinate to hearing and speaking. He would write as he speaks, and we should escape the abomination of bookish talk. At this stage written work should be required far less than at present.

Further, to secure these ends, we must first lay less stress upon correct spelling—which is, after all, of far less importance than we think—and also upon correct, adult Addisonian syntax. Good grammar is too much to expect yet. We

must strive first for utterance and expression, which may be homely if only vigorous and adequate. Hence, much that we call slang has its place, and is really a revival of English in its most formative stage. The boy is not totally depraved because he loves the speech of Chimmie Fadden, of Mr. Ade, or of "The Charwoman," because such language is fresh from the mint where all words were made. Our end is the cultivation of expression, which must bring out clearly and strongly what is in the boy's soul. This expression must be of a kind at least no less effective for other boys than for us. A training that gives the power of writing or even talking upon any subject or upon none in particular is bad and vicious. Children have no right to write unless it is upon some subject that they know and upon which they feel strongly.

At this stage arithmetic, so greatly overdone in American schools, should be mechanized with plenty of mental exercises, and later with rules and processes for written work, with only little attempt at explanation. The elements of geometry, especially on the constructive side, and the metric system should come early, and the rudiments of algebra later. This is the stage, too, for beginning one or two foreign languages. These should always first be taught by ear and mouth.

As to the dead languages, if they are to be taught, Latin should be begun not later than ten or eleven, and Greek never later than twelve or thirteen. Here both object and method are very different. These languages are taught through English, and the eye-hand circuit should have much more prominence. Word matching and translation are the goal. The chief reason why the German boy of fifteen or sixteen in *Unter Secunda* does so easily here what seems to us prodigious is because he is taught to study; and the teacher's chief business in class is not to hear recitations, but to study with the boys. One of the best of these teachers told me that the boy should never see a dictionary or even a vocabulary, but the teacher must be a "pony." The pupil should never be brought face to face with an unknown sentence, but everything must be carefully translated for him; he must note all the unknown words

from the teacher's lips and all the special grammatical points, so that home study and the first part of the next lesson will be merely repetitions of what the teacher had told and done.

The modern school geography should be reduced to about one-fourth or even one-eighth of its present volume. Our geographies do not respect the unity of the child's mind. Their facts are connected neither with each other nor with the nascent stages of growth. The interest in primitive man and animals culminates from nine to ten; that in trade and governmental parts of geography comes from sixteen to twenty. The geographies of the last two or three years have mitigated, but by no means healed, these evils.

The hand is in a sense never so near the brain as now; knowledge never so strongly tends to become practical; muscular development never so conditions mental. Muscle training of every kind, from play up to manual work, must now begin. Instead of the Swedish or other curriculized and exactly finished objects made, we should have a curriculum of toys at first and of rude scientific apparatus later, where everything will focus more upon the ulterior use of the object than upon the process of making it. All these things will be chosen from the field of the child's interests.

Singing will be prominent in the ideal school at this age; but far more time will be given to rote singing than to singing from notes, especially at first. Music is the language of the feelings just as speech is of the intellect. It is as absurd to teach notes to children before they can sing well as it would be to teach them reading before they can speak. The object of musical education in the public school is to express and train the emotions, and, through these, the will and character, to preform joys and conduct, and not to make musicians.

Reason is still very undeveloped. The child's mind is at a stage when there is little in it that has not been brought in by way of sense. We must open wide the eye-gate and the ear-gate. "Show," "demonstrate," and "envisage" should be our watchwords, not "explain." We can easily make casuists and prigs, but we jeopardize thereby the ultimate vigor of

reason. Hence we should explain very little. Even with respect to morals and conduct the chief duty of the child at this age is to obey. In most cases to try to explain brings self-consciousness and conceit.

In fine, this is the age for training, with plenty of space and time, however, for spontaneity and voluntary action. The good teacher is a true *pedotrieb*, or boy driver. He needs some method, but much more matter. He or she finds relatively little sentiment but much selfishness bound up in the hearts of children at this age. One of the chronic errors of too fond mothers and of modern teachers is to overestimate the capacities of children, especially boys, at this age for sympathy with adult feelings or interests. The world we live in is not theirs. We are "Olympians," and can enforce our will because we are stronger. We must be tolerated and respected, and must be treated with all the forms of respect and obedience that we require; but the interest of children at this age is almost exclusively in each other, and in each other's ways, not in adults. This breaks out suddenly, but just later.

Just before this period ends, boys and girls in the ideal school will be chiefly, though not exclusively, placed under the care of teachers of their own sex. At the close of this period the ideal child, ideally trained, will be first of all helpful and active in body and mind; will read and write well; will know a great deal about the different aspects of nature in his home environment; will not be bookish, but will already know a few dozen well-chosen books; will understand and read simple French and German; and will perhaps have had a good start in Latin and Greek. Some buds of specialization will have begun to burgeon. This child will be able to play several dozen games; will know something of a number of industries; and will be able to make several dozen things that he is interested in. He will be respectful, though not particularly affectionate, and will take pleasure in obeying those he likes, and perhaps, more in disobeying those he dislikes. He will have attempted a number of organizations for teams, and will have formed a few societies, but all will have been transient. He will have some

acquaintance with most of the story roots and literary monuments of the world, perhaps two or three score in number. He will sing, and will draw almost anything, not well, but intelligibly and without affectation.

Lastly, the ideal teacher at this age will be the captain of the child's soul; will be able to do some things with his or her body that the child cannot; will be able to answer most of the questions suggested by the field, the forest, the beach, the street, and their denizens; will suggest plays and umpire games; will perhaps know a little of coaching, but will be a stern disciplinarian, genial withal, but rigorous and relentless in his exactions, and intolerant of all scamped work; will love occasional excursions and expeditions; will perhaps sing, play, and draw a little; will be able to do something expertly well; and, as perhaps the culminating quality, will have a repertory of the greatest stories the human race has ever told or heard.

IV. Adolescence is a term now applied to a pretty well-marked stage, beginning at about thirteen with girls and a year later with boys, and lasting about ten years, to the period of complete sexual maturity. It is subdivided into pubescence, the first two years; youth proper, from sixteen to twenty in boys and perhaps fifteen to nineteen in girls; and a finishing stage through the early twenties. The first stage is marked by a great increase in the rate of growth in both height and weight. It is a period of greater susceptibility to sickness for both sexes; but this vulnerability is due to the great changes, and the death rate is lower in the early teens than at any other age. It is the time when there is the most rapid development of the heart and all the feelings and emotions. Fear, anger, love, pity, jealousy, emulation, ambition, and sympathy are either now born or springing into their most intense life. Now young people are interested in adults, and one of their strong passions is to be treated as if they were mature. They desire to know, do, and be all that becomes a man or woman. Childhood is ending, and plans for future vocations now spring into existence, and slowly grow definite and controlling.

There is often a new and exquisite

sensitiveness to every breath of criticism, praise, or blame. All are anxious to know whether they are inferior or superior to others. There may be observed both a new diffidence and a new self-assertion. The largest percentage of criminals is found in the later teens, and at this time most conversions occur also. Both pleasure and pain are vastly intensified. Pugnacity becomes very strong, as does the instinct for showing off. The large muscles and then the small develop rapidly, but are at first unenduring and clumsy. The heart and arteries are suddenly enlarged, and the blood pressure is increased. Blushing is greatly developed. Nature puts body and soul on their mettle.

It is the age when the majority leave school forever and begin life for themselves. The apex of the runaway and truancy curve is here. It is the age of spring fever, when previous life seems dead, and the soul would moult it and be done with it. It is the most vulnerable and difficult of all periods after infancy, the severest test of parent, teacher, and pedagogical methods. It is the point where, in the sequential history of the race, education has begun in every indigenous race, and from which it widens up toward the university and down toward the kindergarten, just in proportion as civilization advances and the mass of culture material grows.

First of all, the drill and mechanism of the previous period must be gradually relaxed, and an appeal must be made to freedom and interest. Individuality must have a far longer tether. We must and can really teach nothing that does not appeal to interests deep enough to make it seem of almost supreme value in the world. We can no longer coerce and break, but must lead and inspire. To drill merely is now to arrest. Each individual must be studied and made a special problem, if his personality is to come to full maturity. Hence, there must be a wide range of elective study for those who continue at school.

In the ideal school system, the sexes will now, for a time at least, pretty much part company. They are beginning to differ in every cell and tissue, and girls for a time need some exemption from competition. They have more

power than boys to draw upon their capital of physical energy and to take out of their system more than it can afford to lose, for the individuals of one generation can consume more than their share of vigor at the expense of posterity. In soul and body girls are more conservative; males vary, differentiate, and are more radical. Reproduction requires a far larger proportion of body and function in females. Now the leaders of the new education for girls recommend training them for self-support, assuming that if wifehood and motherhood come those who have received such a training can best take care of themselves. This assumption is radically wrong and vicious, and should be reversed. Every girl should be educated primarily to become a wife and mother, and, if this is done wisely and broadly, the small minority who remain single will with this training be best able to care for themselves.

A third conclusive and far-reaching principle is that at no stage of life is the power to appreciate and apprehend so very far ahead of the power to express. Hence we should let up on examinations; we should cast our bread upon the waters, knowing that it will be found after many days, because so sensitized is the soul now that nothing is lost. Mental and moral teaching and influences sink at once too deep to be reproduced in examinations of the present type without injury to both mind and will. There is nothing in the whole environment to which the adolescent nature does not keenly respond.

Yet another change is well defined. Whereas previously the pupil could work with some skill and accuracy, now body and mind are both again so plastic and unformed that they are clumsy, and precision and finish cannot be bought except at too great a price. The teacher's cue is now to graft the soul all over with buds and scions, and not to try to gather a harvest. The mind has laid aside its power to finish and elaborate. It can rudely assimilate everything by turns, but nothing well. The fundamental system of the body, which consists of the large muscles and not the small, and which therefore makes coarse massive movements, and not exact ones, has now its innings; and the fundamentals of the

soul, which are instinct and intuition, and not pure intellect, are now in season. We must lay new and larger foundations.

But, more specifically, what do these changes involve in the ideal school of the future? The transition from the grammar to the high school in this country corresponds far better than the European system to the need of changed environment at the age of fourteen; and this constitutes a rare opportunity which has, however, been thrown away.

For all these problems as a class, high-school teachers care less than those of any other grade, if indeed they suspect their existence. For them adolescence is just a stage when children are so much farther along than in the grammar school, and know so much less than they must to enter college. For such teachers the task is simply to convert their pupils into freshmen, and they await with hope or fear the assignment of their stint in the form of college requirements. They have abandoned all initiative; have renounced their birthright of interpreting, and ministering to, the needs of one stage of life; have had little professional training; have little interest in education in the large meaning of that term; and care little for work of the lower grades. The result is that boys, who insist more on their own individuality, leave the high school: in the country at large about sixty per cent of its pupils are now girls.

The college depends on the high school, and not *vice versa*. The latter should declare its independence, and proceed to solve its own problems in its own way; it should strive to fit for life those whose education stops here, and should bring the college to meet its own demands.

Few institutions of modern civilization so distrust human nature as does the modern American high school, when under college domination. For lower grades the law of compulsory attendance is analogous to a high protective tariff, which removes the stimulus to better methods of manufacture, and interferes with the law of competition, which is the main-spring of evolution. The high school is no less effectively protected against the currents of new ideas, and is left to be a victim of tradition, routine, the iron law of mechanism. It takes the easiest way by working under the shelter and dicta-

tion of the college above and on the momentum of the grammar school below. This, I believe, accounts for the rapidly decreasing numbers as we go up the high-school classes; for the decreasing proportion of high-school boys who go to college; for the preponderance of girls in the high school; and for the educational apathy of the high-school teacher, who is prone to all the narrowness and affectation of the specialist, without his redeeming virtue of productiveness in research.

The teacher must teach more, and know more; he must be a living fountain, not a stagnant pool. He should not be a dealer in desiccated, second-hand knowledge, a mere giver-out and hearer of lessons. That is the chief and humiliating difference between our secondary teachers and those abroad, who are mostly doctors of philosophy, as they should be. If we could move many university professors to the college, many college professors to the high school, many high-school teachers to the grammar school, and some grammar-school teachers, with at least a sprinkling of college graduates, into the kindergarten, it would do much.

I have spoken frankly, and have dealt only with general principles over a vast field, far too large to be adequately discussed here. I have carefully avoided all details, although I have fully worked them out on paper at great length, for

each topic to the close of the high-school period or the age of nineteen, when physical growth is essentially completed. This material will soon appear in a volume. The chief petition in my daily prayer now is for a millionaire. With the means at hand, I have no shadow of doubt or fear but that in five years from the date of any adequate gift, we shall be able to invite all interested to a system of education, covering this ground, which will be a practical realization of much present prophecy, and which will commend itself even to the most conservative defenders of things as they are and have been, because the best things established will be in it. But it will be essentially pedocentric rather than scholiocentric; it may be a little like the Reformation, which insisted that the Sabbath, the Bible, and the church were made for man and not he for them; it will fit both the practices and the results of modern science and psychological study; it will make religion and morals more effective; and, perhaps, above all, it will give individuality in the school its full rights, as befits a republican form of government, and will contribute something to bring the race to the higher maturity of the superman that is to be, effectiveness in developing which is the highest and final test of art, science, religion, home, state, literature, and every human institution.

BARDEEN--BARNARD.

The best news of the season is the announcement that C. W. Bardeen, of Syracuse, has secured all the plates, volumes, bound and unbound, of the late Henry Barnard's publications. There are in all thirty-five tons of material. Now it will be possible for the educational world to have the advantage of the treasures in these writings which not only have not been available in recent years, but which would undoubtedly never have been had not Mr. Bardeen secured these plates and volumes. No other publisher is in position to bring the necessary order out of chaos.

There are 21,000 plates, weighing fifteen tons. These are the pages of the

famous thirty volumes of the "Barnard Journal of Education." All trouble has arisen from the fact that Dr. Barnard had from time to time taken out of these various volumes plates for the making of eighteen other special books, and the stray plates were never put back where they belonged.

Of the thirty volumes, Mr. Bardeen will be prepared very soon, probably by October, to furnish twenty-seven, and one by one the other three volumes will be gotten ready, but it will be impossible to say when the last of these will come from the bindery.

Of the eighteen special books, there are now some volumes of each, though

only one of these will ever be reprinted. This is "The Kindergarten and Child Study Papers." Those who desire a complete set of Dr. Barnard's works must attend to the matter at once.

Think what it means to have Mr. Bardeen make available some books that have not been upon the market for fifteen years! Now for the first time a publisher has possession of the annotations of Dr. Barnard, which are on the margins of the first edition. This may mean much in the matter of perfecting the new edition. Mr. Bardeen also possesses the complete index to everything that Dr. Barnard ever wrote, an index that contains four times as many titles as that

issued by the United States bureau of education.

It is also of interest to note that the conditions upon which Mr. Bardeen secured all these treasures is that one-half of all the profits shall go to the daughters, who will thus be able to retain the home and birthplace of their father. There is nothing else in the world so valuable as a source of educational information as these publications which Mr. Bardeen has rescued, and aside from their value, it is a grand thing that the Barnard birthplace and life-long homestead is to be preserved and occupied by the daughters—the great American educational Mecca.—*New England Journal of Education*.

SCIENCE OF EDUCATION, ITS PRESENT ASPECT AND OUTLOOK.

BY PROF. FRANCIS W. PARKER,

School of Education of the University of Chicago.

It is twenty-nine brief years since the beginning of the first real kindergarten in America. Madam Kraus-Boelte is still young and vigorous, and enthusiastic in her divine work, which she began in 1872. The great apostle of the kindergarten in America, Miss Elizabeth Peabody, whose memory we reverence to-day and always, had done some wise, earnest, careful work in preparation. She found the kindergarten and brought it to America. It is needless to recount the marvelous history of the growth of the kindergarten in our free land. Indeed it is so close to us that we, youngest and oldest, are familiar with it. The fire of that spirit which leads to liberty touched the freedom-loving soul of Miss Peabody. The problem was the evolution of a free government, and she saw the great initiatory work of Froebel. Then it flew from East to West. We know how Miss Blow took it up in St. Louis, and Mrs. Putnam in Chicago, and we also know of the divine work of Agassiz's daughter, Mrs. Shaw. Not only in this century, but in all the ages past, never came a reform in education more needed and more potent.

This great meeting of the International Kindergarten Association testifies to the zeal and enthusiasm all over America. From every quarter of this great country you come to get renewed inspiration and guidance to push your work on to higher life. And it is to go on. Just how we may not know; just when it will reach its highest goal we do not know. We do know that there is much of prayer, much of work, much of thought ahead.

Our fathers founded the common school, the most divine institution on earth, to evolve a free government, a republic. The organization of the common school is yet young, dating from 1837, when Horace Mann took the leadership in Massachusetts. Yet though in its swaddling clothes it holds that which will regenerate the world. And if the kindergarten is true to the principles of Froebel, it will permeate and penetrate the whole common school system, from the lowest grade to the highest, for the principles of Froebel are just as applicable to the university as to the kindergarten. The kindergarten spirit has entered and will enter more and more, into the

common school, until the name of the kindergarten shall be absorbed in one name—the common school—leaving that name a glorious history behind and a still greater work before.

What of the past? What of the future? What of the problems? What of the needs? Where shall we seek the best guidance, the best help, to promote the principles of Froebel?

Since Froebel's glorious day a great abundance of nutrition for the minds of children has come to us. Scientists in all fields have forced the secrets of nature; have interpreted man's life, his language, his manner, and process of development. We have these products which Froebel did not have. All the knowledge that has been discovered, or that ever will be discovered, is for the child and for the people and for the higher life.

I need not speak at any length of the marvelous changes in science, for every science that existed only in name at the beginning of the century has been revolutionized, and some new sciences have come into being. The picture is one for us to consider. In innumerable laboratories, in the fields, under the stars—everywhere—are trained thinkers who have a firm belief in the infinite possibilities of discovery. These searchers for truth believe that all that has been discovered in any realm of science is but touching "the hem of the garment." And so they are delving, experimenting, investigating, and when a truth is discovered it is made free as the air to all the world. The discoverer presents the data that lead up to his conclusions; his brother scientists eagerly examine them, make the same and other experiments; in short, rigidly test the truth of the discovery, and then reject or accept it. A discovery that has not the requisite proof back of it, or which cannot be fully demonstrated, is discarded. This is not according to law written or unwritten; it is simply a common sense mode of procedure that is held by all real scientists.

The discovery of truth, like the Roentgen ray, or the Pasteur cure, or whatever it be, is, as I have said, the common property of all scientists and of the world. It goes into further investiga-

tion; it forms a step in the onward march of discovery.

I am not quite sure that I have not overestimated this, the general, method of the scientist. He may or may not be inspired by the ethical value of his discovery; but whether he is inspired by it or not, all discoveries in science are for all who are able to take them. There are indeed contests long and earnest. For instance, some geologists think that they discovered the remains of man before the glacial period; others think that they did not. What is to decide? New investigations. If human bones and implements are found deposited beneath the glacial drift, that is a proof. The question arouses the best of research. Those who do or do not believe in the preglacial existence of human beings are willing, on substantial proof, to give up their working hypothesis.

Here we have a common but unwritten law, found in the necessities of study, a law which binds together all scientists as one band of brothers, unites them in a common cause; makes truth sacred, and regenerates the world with constantly renewed necessities for higher living. Quacks and charlatans are ordered to the rear, and only those who think and work for the truth through long years are admitted to the circle of genuine scientists. The field is altogether too broad and deep to admit of jealousy and fruitless bickerings.

The history of science is an absolute necessity to anything like an economical onward movement. The scientist must know what has been done in order to work effectively. It is the free and common contribution of all that is found which makes true progress possible and science glorious.

The scientific method has its antipodes in the well known methods that preceded the new light and life. The old method, if it may be so called, inclosed, hemmed in, obstructed, the dissemination of truth by making it into a fixed doctrine with a fixed method. A philosopher, statesman, philanthropist, or theologian, inspired by the urgent needs of mankind, reveals a sunburst of new light. Adherents, disciples, crowd around the proph-

et and drink in the inspiration. Then comes the mistake, the error, common to all ages. The eager disciples fondly believe that all truth has been discovered by their leader—all truth instead of a scintilla of infinite knowledge. Instead of using the new light to reveal more and more the boundless vista of eternal truths, the new found truth is made into a cold and fixed belief. To use a figure, deducing a doctrine from the words of the reformer, the devoted adherents build a wall, so to speak, around their shrine, and plant their cannon for aggression and defense. Their purpose is the interpretation and maintenance of their leader's doctrine. The doctrine degrades itself into forms and ceremonies. The devotees fail to hear the words: "The letter killeth, but the spirit giveth life." Enthusiasm, blind zeal, persistence, proselytism, control them. Patriotism, loyalty, piety, mean steadfast devotion to doctrine. To doubt the interpretations they have made is disloyalty to their chosen leader. New truth is shut out. To doubt the truth as they understand it is impiety. To sustain the doctrine as they understand it is virtue. Have I to cite instances of this process that has been going on throughout the ages? The Adamic theory of creation kept man from looking thoughtfully at the earth for long centuries. Startled with a problem, he solved it easily with a foregone conclusion. There was no opening for thought; no understanding of how God is creating the world now, as he was creating it millions of years ago. "They have eyes but see not." We know the history of the Ptolemaic theory. What vast tomes were written upon it! How much eloquence was expended upon it! What vast range of learning was adduced to prove it! But the monk Copernicus in his cloister broke the line, reversed the working hypothesis; and we know his history; and that of Galileo, his co-worker. Galileo knew the books, the vast volumes of erudition, upon astronomy; but he had the temerity to go out and look upon the stars, and he had the awful temerity to doubt the conclusions of the past. Very slowly the learned men and the intelligent world were agreed to the new working

hypothesis. We have all believed and as teachers have taught La Place's nebular theory, but now come men who doubt that hypothesis and propose another, namely, that of the meteoric formation of worlds. They may not have proved it, but the true scientists who believe in La Place's theory are ready for open-minded investigation. When Darwin's world-astonishing doctrine burst upon the world, the eloquence, the erudition, the wisdom, the contempt that were poured out upon his head were without stint or measure. But the scientists, one after another, began to examine the doctrine and its proof, and to-day no person of average intelligence, unless he is paid to do so, doubts the general truth of evolution.

But neither Copernicus, Galileo, La Place, or Darwin found the final truth. The great function of Darwin, as of the others, was to open up questions, and the whole scientific world is working upon them.

The lessons of the old methods and of the new are indeed very plain ones. We who have at heart the highest interests of the children of to-day and of the millions yet to be should earnestly consider the lines of true progress. You see the two propositions. Shall we go on as the world is going finding a doctrine, interpreting it in a hundred ways, fighting within the lines, preaching that doctrine? Or shall we follow, step by step, the word of the Master: "The letter killeth, but the spirit giveth life;" "He that doeth righteousness is righteous;" "He that doeth the will shall know of the doctrine"? A shut-up doctrine of any kind based upon absolute faith in creed—scientific, political, or what not—moves not into the great problem of life; it stands and defends itself; it believes that certain things, ceremonies, forms, methods, will bring about certain changes. Never doubting the doctrine, its adherents seek no higher things.

The world changes. All ideas are born under certain circumstances. The birth of an idea is from the womb of the people. We need not say how the whole world has been revolutionized. Society is changing every hour, every day; new problems are arising. These

problems are answered in two ways: one that of the scientist; the other that of him who is shut up in his own doctrine and belief. Which will you choose, you who are the advance guard of progress? The sentence was spoken ages ago, but to-day it is as mighty as ever, though the words of the great Master have hardly reached the heart of mankind, "The truth shall make you free." What truth? The hypothesis of tradition, of a leader, of a doctrinaire? No! by all means, no! It is the truth you find yourself in God and man that sets you free. Like the scientist we must discover truth and set it to work out human weal. Like the scientist we must contribute all we find to our hungry co-workers. Like the scientist we must take all that is true and put it into the lives of the children.

Is the past of no use to us? Of infinite use. It is our glorious inheritance; our warning and our guide; our boundless treasure to study and understand; to use in the solution of present problems. In truth, we comprehend history only as we use it for the benefit of mankind. What we must give up is the letter that killeth. We must take into our heart of hearts the spirit of all revelations for the good of man. Froebel, our leader, has words that should be wrought into our souls to-day.

"For the living thought, the eternal divine principle as such demands and requires free self-activity and self-determination on the part of man, the being created for freedom in the image of God.

"Again, a life whose ideal value has been perfectly established in experience never aims *to serve as model in its form*, but only in its essence, in its spirit. *It is the greatest mistake to suppose that spiritual, human perfection can serve as a model in its form.* This accounts for the common experience that the taking of such external manifestations of perfection as examples, instead of elevating mankind, *checks, nay represses, its development.*

"It is true, in word or example, the ideal is mandatory in all these cases, but always only with reference to the spirit and inner life, never with reference to outer form.

"Exhibit only thy spiritual essence, thy life, in the external, and by means of the external, in thy actions, and observe the requirements of thy inner being and its nature."

Thus Froebel himself opposed with all the wisdom and energy of his mighty nature the following of form alone. There are two ways, the prescribed, foreordained forms, courses of study to be applied to all children alike; or the study of the individual child, its nature, and the needs of community life. The best that a teacher or kindergartner can have is a boundless faith in the possibilities of human growth and the quality of spirit that measures self with that great purpose. Then come life and joy and progress into the schoolroom.

Now let us make this proposition: a doctrine, a prescribed course, shuts people up; but the moment a great problem, such as Froebel, Pestalozzi, Comenius, and our own Horace Mann had, takes shape, then all the past comes in, not as a fixed doctrine or as a fixed method or a prescribed mode of procedure. The moment the problem comes to make men better, these children better, humanity better, then come to your hand, ready to assist you, all the reinforcement of the history and science of the past. It is fixedness of doctrine and method that I deny to be right. It is movement, progress, I plead for in the name of the problem of human liberty, that has become greater and greater to the American people. I am pleading for the teacher who studies the children, the community, and all the factors that enter into the child's life and into community life, and applies that which is good.

The great-souled Froebel began a mighty work. He saw visions of a regenerated humanity. And he took one step, which so far we have limited to little children. That step means a new spirit in education, a new life. It means that the teacher is one day to be the greatest artist on earth; that the art of Michael Angelo and Rubens sinks far below the art of developing immortal souls. What has been given us in the last few years, for instance, by physiological psychology? We know now that dullness, sluggishness, weak-mindedness,

are direct results of an imperfect body. We know that. This has been found since Froebel's day. No one can say what impulse Froebel gave to the researches that resulted in this discovery. We know that there are definite stages of growth in children, and that children must have the nourishment needed for each stage. We know that the adolescent period is a period when the child's soul can be turned to heaven or cast down to hell. We know these and many more things in education. Shall they come to us, or shall we as doctrinaires shut them out from us and say, "Froebel knew"? I asked a superintendent of kindergarten what she proposed to do, and she answered: "What Froebel did; he knew." That is all one needs to know of that kindergarten—no thoroughfare. But you say there will be a great deal of bad work. We must expect blundering. Blundering and crudeness are paths to higher things. We must get at the nature of the child and furnish him the best we can—the means for all-around activities, play and work, for the development of what is most precious—a high motive.

As one who has taught school and has tried to help children for forty-seven years, can I prophesy? No, I have no right to do it. If good, sound reason is not behind what I say, then, according to the scientific method, it should pass as idle wind. But I know that this country, which is working out the problem of the ages, of the world, of all the future, must have something better for the education of children. I know that God has furnished inexhaustible means for

the help of the human race. I know that the function of the teacher is to be a mediator; that God with his riches will give man with his needs the bread of life every day and every hour.

I believe that Froebel has found a better and a higher way. Will you choose it? Listen to these words, "Be not conformed to this world, but be transformed in the newness of light." The "newness of light" is not a will-o'-the-wisp, it is not following this or that or the other. It comes when on your knees you face the question of child growth and the nation's future, yea, the world's future. It comes when you earnestly study the needs of children and of society. It will come like a wave of newness of life, and, believe me, it will help you in all your work.

It was my great good fortune to be a soldier in the "greatest civil war that ever darkened the earth." I thank God I was old enough to go. I have also been in the war that is infinitely higher, that is, in the war of spirit, in the struggle for the higher life. These words came to me in camp and on the battle field:

"Mine eyes have seen the glory of the coming
of the Lord.
In the beauty of the lilies Christ was born
across the sea:
As he died to make men holy, let us die to
make men free."

Let me change one word.

Mine eyes have seen the glory of the coming
of the Lord.
In the beauty of the lilies Christ was born
across the sea:
As he died to make men holy, let us *live* to
make men free.

—*Kindergarten Review.*

THE DOCTRINE OF ELECTION.

BY HENRY SABIN,
Des Moines, Ia.

The educational world of today is plagued in all its members with the dry rot of uniformity. There is a manifest tendency to bring everything pertaining to school interests to one dead level. To this end we have courses of study adapted to the wants of every high school; courses of study for grammar schools, for primary schools and for rural schools. We are seeking for uniformity in requirements for college entrance. There is to be uniformity in each and every institute—one model for all. The same questions are submitted for the examination of teachers, whether the candidate is a graduate of the common school or the university. We already have in several states a strict uniformity of text-books, and it is almost a penal offense to use any other than the one prescribed by the law. In our larger cities uniform rules and regulations fetter the teacher at every step. Uniformity in discipline; uniformity in methods—uniformity everywhere; uniformity run mad.

Then we have manuals which direct the teacher and guide every step. Manuals for physical culture; manuals for nature study; manuals for child study—manuals for every conceivable subject in the course of study. Armed with a manual and a course of study, the teacher feels himself competent to undertake the teaching of any branch in the curriculum. A manufacturer once said, "What I am seeking now is a machine so simple that a fool can run it." We seem to be aiming at the same end in school affairs. The cry is to simplify, simplify, and simplify until there is no work left for the teacher's brains.

What a teacher who really desired to live and grow said the other day in a private conversation is literally true. "I would like to be permitted to make use of my brains in school matters, but if I did I should lose my position in six months." Everything is made to hand, cut and dried, ready to be dished out, so many spoonfuls at each meal.

It is time to call a halt, at least long enough for consideration of some important points. I have been asked many times to make out a course of study for "our high school." My answer has always been something like this: "I do not know the present conditions of your school, and am entirely ignorant of the surroundings. I would not willingly prepare such a course for any school until I had had a year's experience in it as principal or teacher." Before I attempt such a course I must know the present advancement of the pupils; their ability to master subjects; their habits of study; their previous training, and the environments of the school.

Every school has its individuality, and it must be respected in making out a course of study which can be carried out intelligently. If I were again to undertake the charge of the schools in a city or a town, I would do this: I would fix upon a minimum in each study to be attained in every grade, so that pupils moving from one part of the city to another might find a place without loss of time. Beyond that, I would leave each school free to do as much work as could be well done. The children who come from families where books and the best influences are formed, should have liberty to advance as rapidly as the circumstances would admit. The children from families in which there is little opportunity for improvement should not be compelled to cover so much ground in the text-books that no time is allowed for work in general culture which they so much need. Pupils in the class first mentioned need direction and often restraint in their reading; they need drill in their lessons, and to be taught the value of close application. Those in the class last mentioned need first of all to have habits of reading formed and the taste for reading cultivated. The work done for these is of a different nature from that done for the other class.

It is not uniformity which we need,

but a wise differentiation. Right here I would apply the doctrine of election in its fullest sense. There is a great difference in text-books, and I would not hesitate to make such selection of books for different buildings as would seem to best suit the case. The teachers should have great latitude in choice of methods. There is little to be said for a superintendent who compels the teachers under him to use one, and only one, method in teaching reading or arithmetic or any other branch. There is no one method which is of universal application. "Hobson's choice" cannot be applied here.

This from Thring: "It is lives, not lessons, that are dealt with. The great factor of time determines the possible and the impossible." And yet our election of books and teachers and methods is made entirely with regard to lessons; none at all regarding lives.

There is room for the anarchist in the education work of today; not to introduce chaos, but to make freedom possible. There is an old arithmetical problem something like this: "A barn 20 ft. square was situated in the center of a lot. How much ground can a horse graze upon if he is hitched to the northeast corner by a rope fifty feet in length?" So the teacher of today is hitched to his work by a tether of prescribed length, and must graze every inch of his ground before he can be moved to fresh pastures. The problem recurs to him continually: "How much ground can I cover?" Thring says: "A teacher is a combination of head, heart, artistic training and favoring circumstances. Like all other high arts, life must have free play or there can be no teaching." He adds: "Teaching is not possible if an inspector is coming to count the number of bricks made to order." He might have added, with equal truth, that teaching is not possible if the teacher has no higher ambition than to make bricks to order.

"Let me see a specimen of your work," I said to the tailor. He did not take me into the shop where the hands were at work, nor did he bring me a coat half made or a vest just cut out of the cloth.

He showed me a whole suit hung up ready for delivery that I might inspect its entire make-up. Even that did not convince me, and he pointed to a person in the street whose garments were a perfect fit and says, "They were made in my shop." That convinced me that it was safe to try him. The inspector examines the work of the school in pieces. He hears a class recite in this and then in that study. He stays an hour in one room to-day, and an hour in another room to-morrow or next week. He has no means of studying the work of the teacher in the finished product which the school turns out. A teacher in applying for a position wrote: "Mr. So-and-So went to school to me. Mrs. So-and-So was under my tuition for three years. Ask them about my teaching." It was the best test of her work; in fact, the only real test that she could offer.

The inspector asks himself the question, "What is this school doing?" I have known him to carry about in his pocket a little memorandum in which he noted certain points for his own guidance in determining in his mind the real success of the teacher. He notes that the school is orderly, the recitation fair, the class in arithmetic has reached page 45, and so on to the end of a long list. But what of the influence of the school over the lives of the pupils? What of that character growth which sends its root deep into the soul of the man? What of the cultivation of the will power? What of the culture of that conscience which holds the will to its purpose of resistance when the hour of temptation comes? What of the high ideals which the child has formed through the example and precepts which the teacher has kept continually before him? In a word, what kind of manhood and womanhood is likely to be developed as the result of this teacher's work? The work of Thomas Arnold, of Edward Thring, of Mary Lyon, of Daniel P. Page, would not stand for a moment the superficial test applied to the teachers in the schools of this new century.—*Education*.

LITERATURE IN THE SCHOOLS.

BY A. B. DICK.

In this day of universal education and the profuse distribution of books, the formation of a pure taste should be one of the highest educational aims. The knowledge of the greatness of literature as an influence in the world, and the experience of its vivifying and sustaining power, have a higher value for the rising generation than all the problems of Euclid. To know the biography of the human race, as recorded in its literature; to learn the thoughts of the best minds on the problems of life; to sit at the feet of the historian; to see with the eyes of the poet, and walk in the light of his interpretation—it is thus that man may gradually rise to the fulfillment of his divine destiny. When we see such a vast number of readers without any relish for the higher literature, and when we look for the cause, and consider how a sound judgment and a pure taste may be formed, our eye finally rests upon the school as the place where a reform in the popular appreciation of literature must begin. A true perception of its higher qualities can only come as the fruits of a better education, by a better class of educators.

The subject does not occupy the place in our public educational systems that its importance demands; it is not, in a proper sense, there at all. Teachers are not educated in literature. There is, indeed, among them, contentment with such acquirements in general education as will secure appointments, and no further aspirations. What we want are thoroughly educated men and women who have trained minds, sound judgment, good manners, and refined common sense. We want the products of literature as the teachers of it.

The well-trained mind turns to such books as the mental powers can be exercised in as naturally as the eagle pierces the sky. If a boy at school have tasted the sweetness of knowledge—if his eye have had a real look down the vista of history, his mind captivated by some revelation of science, and his inward eye lighted up at the poet's fire—he will be able to look beyond the hill-tops of time,

and lay hold of the eternities. But, if he be turned out half-educated, he is incapable of the effort required in the reading of a real book, and turns to the scraps of the press as naturally as a duck takes to water. Many of the subjects on which teachers spend their time, and which are taught in the schools, may never be of the least value to the learner; but a real knowledge of the best books, as they are related to him and to themselves, is a never-failing stay in all the vicissitudes of life.

It is to men and women who possess true culture, and that quality of enthusiasm, natural or acquired, which is an essential condition in the best educational work, that we must look for what is needed, and to such alone. Those who have it not have the root of the matter in them—the knowledge from which it springs; for there is no condition which so breeds this enthusiasm as that of mental fullness and activity.

If the school is to be the cradle of this reform, the home must be its birth-place. Parents must be aroused to its importance. For them, education is a natural duty which they cannot shake off, or delegate to the sole care of others, neither in church nor state, without the evils accruing which invariably result from the breach of a natural law. Hence is seen the importance of a wide dissemination throughout the homes of the nation, by every possible agency, of wholesome literature, by which the fathers and mothers of to-day shall be informed, and inspired with an earnest purpose to see to their children's education in what will infuse into the family-life pure impulses, and surround the home with the blessings and graces of a healthy culture. The teaching of literature in a large sense in our schools, by accomplished scholars, imbued with the enthusiasm of humanity, would accomplish a work which only the poet has dreamed of—such a work as would put a new spirit within us, and endow the generations to come with a fuller and higher individual and national life.—*Philadelphia Times*.

TEACHING GEOGRAPHY.*

BY DR. G. STANLEY HALL,
President of Clark University.

Our text-books treat not of geography merely, but rather of cosmology, or universology, including astronomy, geology, zoology, anthropology, botany, meteorology, trade and commerce, politics, history, cartography, each of these and others not put in places by themselves but scattered through the book, ignoring all inner coherence, running against all unity of the mind.

A serpent was once thought a good symbol of wisdom, but a sausage would now seem to be the proper symbol of geographical wisdom. Modern books pay no attention to the capacity of the children during their nascent periods. Geography as we teach it is a sort of gehenna, a place of skulls, a relic of the old science from which all the modern sciences have split off. Most of the texts are written by men without liberal education, calculated to take the eyes of school committees.

These geographies should be used only as reference books, and have two different kinds of texts. For the lower grade a book full of pictures, with animal lore, but no maps, which are at best a ghastly kind of skeletons. For older pupils, there

should be much apparatus, large collections, reference books.

In the country schools geography should be a study of the home surroundings, exploring brooks and creeks, stones, flowers, crops, wells, cellar holes, telegraph lines, using a sun dial gnomon, weather vanes, weather study, but no books to depend upon. I introduced the method in a little town of 800 inhabitants near Worcester, with the help of local people, working out a local curriculum of "knowledge of home." It was not quite satisfactory to the school committee, who found our children could not bound Wisconsin, and doubted the wisdom of "education by picnics," but the experiment proved to me the possibilities of geography as a study of outdoors. In the city I would take the children to the markets, wharves, parks, city hall.

I have no completed plan to submit for geographical study, but I maintain that the present situation is intolerable, even in refined and self-satisfied, but rather unprogressive, Boston. I would be glad to officiate as a Socratic gadfly to stir you up to advanced thinking and practical reform.

THE EDUCATIONAL INFLUENCE OF THE EXPOSITION.

BY NICHOLAS MURRAY BUTLER.

There are too many expositions, says the man of the world. He is tired of globe trotting, jaded with sight seeing and bored with life itself. But the tens of thousands of men and women—and children, too—who leave home for a serious journey but once or twice in a lifetime do not agree with him. To them, happily, life is full of interest and of awe. The newspapers and magazines create for

them a thousand curious wants which they do not satisfy. They are constantly on the alert to learn more about the newest epoch making invention, to see if possible with their own eyes, or to touch perhaps with their own hands, some of the world's wonder working machines, or to feast upon typical art products of mankind, long familiar through verbal description and by photograph.

*From an address delivered at a meeting of the New England superintendents.

These are the men and women to whom a visit to a great exposition is as full of novelty, of strange sensations and of charm as is a first trip to Europe. It is for many thousands a liberalizing and an educating influence.

The Pan-American Exposition at Buffalo seems to be singularly fortunate in the satisfaction which it offers to the earnest and intelligent visitor in just these educational aspects. It is, in the first place, compact, and therefore more readily and more fully comprehensible than if it were more complex and scattered over wider and more fatiguing areas. Because of this fact it makes an impression as a unit, and thereby forces its characteristics of harmony, proportion, striking sculpture, beauty of color and splendor of decoration upon the willing attention of even the most provincial of visitors. Of the art and architecture of the Pan-American I have no technical competence to speak, but even a layman in the arts cannot fail to notice the deep esthetic impression that the exposition makes upon himself and those about him. This is education in the best sense. It is a stimulus to fine feeling, to an appreciation of beauty in color and in form, and it is food for many subsequent feelings of the same sort. It is one of the main steps by which a whole people get an art education.

It is not easy to trace to all of its sources the newer movement in public and domestic architecture, in decoration, in parks and in landscape gardening, but surely every such display on a grand scale of high standards in all of these, as at Chicago or at Buffalo, must have a powerful effect upon that great formless, yet educable, monster, public opinion. We are moving, as a people, toward a new and fuller recognition of the place and value of the esthetic element in life, and I, for one, feel confident that these great expositions, in which art exerts itself to the utmost, are found art education's most powerful ally.

Much the most striking and best displayed exhibits at the Pan-American are those contributed by the government of the United States. Even to view them hurriedly is instructive and informing, but to go through them with thoughtful

care is a liberal education in regard to many matters of national concern. The work of the Department of Agriculture, which, with intelligent skill and every resource of modern science at its command, is pointing out to hundreds of thousands of persons how to develop more effectively the country's resources and their own, how to detect and prevent destructive disease in animal and in plant, and how to extend the area of certain profitable crops. All of these things are illustrated at Buffalo with great skill and by concrete example. The exhibits are veritable text-books of a most useful and helpful knowledge, and there is every sign that these are being much read.

Or, again, examine the display made by the war department. Side by side with the modern arms and ordnance, intended for purposes of destruction, are shown models of the engineering work by which are carried on the great river and harbor improvements, intended to develop commerce, industry and the arts of peace. One sees, in a few moments, what steps are taken to confine rivers to their banks and to make fixed channels for the safe carrying of commerce.

In similar fashion any striking and well arranged exhibit educates. It corrects false ideas, fills out gaps in an imperfect knowledge and suggests a thousand and one trains of thought which do not soon exhaust themselves.

By no means last or least must be reckoned the undefined but powerful educational influence of any attempt to realize on a vast scale a high and worthy ideal. These noble buildings and all that they suggest, compel thought. Why are they here? How did the exposition come to be called Pan-American? What thought lies behind the words Pan-American? These questions, and a score of others like them, are uppermost in the minds of many visitors as they journey homeward with the glorious impressions still fresh and strong.

To answer these questions, or to discuss them intelligently, is to develop new knowledge and new reflective power. A sharp pair of ears would have heard some development of this sort going on while the crowds were at the exposition itself. The fact is that underneath the com-



BLUE BIRD.
Life-size.

COPYRIGHT 1900, BY A. W. HUNFORD, CHICAGO



mercial purpose of stimulating trade between the United States and the other nations on American soil, there lies the perhaps unconscious aim of bringing into closer intellectual and ethical relations the republican communities, stable and unstable, that inhabit the Western world. In the past these communities, with very few exceptions, have known little of one another's life. The dependence of the South African republics is upon Europe, and the people of the United States have been for them fellow Americans only in name. Madrid, Paris and London have been their capitals, not New York and Washington. It is now time for the currents of thought and social influence, as well as for those of trade, to flow more strongly north and south. For this, mutual respect and confidence are needed, and these can follow only upon mutual acquaintance. The South and the Central American must be taught that their gigantic northern neighbor is a comrade and friend, and not a potential tyrant or oppressor; and the inhabitants of the

United States must learn that his nation's size and strength and wealth do not make unnecessary or unworthy the serious efforts of Latin and Teutonic communities to the south of us to build American institutions of their own. If the Pan-American can put these thoughts, and those that flow from them, into some thousands of heads, it will have greatly promoted the peace, prosperity and good will of the New World. This is surely education.

Education itself, as a great national interest, has never yet been properly displayed at an exposition. It is much crowded and limited at Buffalo. Some day an exposition will arise in which education will have a palatial building of its own, as striking a feature in the architectural plan as education itself is in the national life. It will be the most sought-out and the best remembered spot of all, for nothing is more fully representative of the American people than their educational activity and interest.—*Abstract of an article in the Cosmopolitan.*

THE BLUE BIRD.

Winged lute that we call a blue bird,
You blend in a silver strain
The sound of the laughing waters,
The patter of spring's sweet rain,
The voice of the wind, the sunshine,
And fragrance of blossoming things,
Ah! you are a poem of April
That God endowed with wings. E. E. R.

LIKE a bit of sky this little harbinger of spring appears, as we see him and his mate househunting in early March. Oftentimes he makes his appearance as early as the middle of February, when his attractive note is heard long before he himself is seen. He is one of the last to leave us, and although the month of November is usually chosen by him as the fitting time for departure to a milder clime, his plaintive note is quite commonly heard on pleasant days throughout the winter season, and a few of the braver and hardier ones never entirely desert us. The Robin and the Blue Bird are tenderly associated in the memories of most persons whose childhood was passed on a farm or in the country village. Before the advent of the English Sparrow, the Blue Bird was sure to be the first to occupy and the last to defend the little box prepared for his return, appearing in his blue jacket somewhat in advance of the plainly habited female, who on her arrival quite often found a habitation selected and ready for her acceptance, should he find favor in her sight. And then he becomes a most devoted husband and father, sitting by the nest and warbling with earnest affection his exquisite tune, and occasionally flying away in search of food for his mate and nestlings.

The Blue Bird rears two broods in the season, and, should the weather be mild, even three. His nest contains three eggs.

In the spring and summer when he is happy and gay, his song is ex-

tremely soft and agreeable, while it grows very mournful and plaintive as cold weather approaches. He is mild of temper, and a peaceable and harmless neighbor, setting a fine example of amiability to his feathered friends. In the early spring, however, he wages war against robins, wrens, swallows, and other birds whose habitations are of a kind to take his fancy. A celebrated naturalist says: "This bird seems incapable of uttering a harsh note, or of doing a spiteful, ill-tempered thing."

Nearly everybody has his anecdote to tell of the Blue Bird's courage, but the author of "Wake Robin" tells his exquisitely thus: "A few years ago I put up a little bird house in the back end of my garden for the accommodation of the wrens, and every season a pair have taken up their abode there. 'One spring a pair of Blue Birds looked into the tenement, and lingered about several days, leading me to hope that they would conclude to occupy it. But they finally went away. Late in the season the wrens appeared, and after a little coquetting, were regularly installed in their old quarters, and were as happy as only wrens can be. But before their honeymoon was over, the Blue Birds returned. I knew something was wrong before I was up in the morning. Instead of that voluble and gushing song outside the window, I heard the wrens scolding and crying out at a fearful rate, and on going out saw the Blue Birds in possession of the box. The poor wrens were in despair and were forced to look for other quarters."

THE GOLDFINCH.

ACCORDING to one intelligent observer, the Finches are, in Nature's economy, entrusted with the task of keeping the weeds in subjection, and the gay and elegant little Goldfinch is probably one of the most useful, for its food is found to consist, for the greater part, of seeds most hurtful to the works of man. "The charlock that so often chokes his cereal crops is partly kept in bounds by his vigilance, and the dock, whose rank vegetation would, if allowed to cast all its seeds, spread barrenness around, is also one of his store houses, and the rank grasses, at their seeding time, are his chief support." Another writer, whose study of this bird has been made with care, calls our American Goldfinch one of the loveliest of birds. With his elegant plumage, his rythmical, undulatory flight, his beautiful song, and his more beautiful soul, he ought to be one of the best beloved, if not one of the most famous; but he has never yet had half his deserts. He is like the Chickadee, and yet different. He is not so extremely confiding, nor should I call him merry. But he is always cheerful, in spite of his so-called plaintive note, from which he gets one of his names, and always amiable. So far as I know, he never utters a harsh sound; even the young ones asking for food, use only smooth, musical tones. During the pairing season, his delight often becomes rapturous. To see him then, hovering and singing,—or, better still, to see the devoted pair hovering together, billing and singing,—is enough to do even a cynic good. The happy lovers! They have never read it in a book, but it is written on their hearts,

"The gentle law that each should be
The other's heaven and harmony."

In building his nest, the Goldfinch uses much ingenuity, lichens and moss being woven so deeply into the walls that the whole surface is quite smooth. Instead of choosing the forks of a bough, this Finch likes to make its nest near the end of a horizontal branch, so that it moves about and dances up and down as the branch is swayed by the wind. It might be thought that the eggs would be shaken out by a tolerably sharp breeze, and such would indeed be the case, were they not kept in their place by the form of the nest. On examination, it will be seen to have the edge thickened and slightly turned inward, so that when the nest is tilted on one side by the swaying of the bough, the eggs are still retained within. It is lined with vegetable down, and on this soft bed repose five pretty eggs, white, tinged with blue, and diversified with small grayish purple spots.

A curious story is told of a caged Goldfinch, which in pleasant weather always hung in a window. One day, hearing strange bird voices, the owner looked up from her seat and saw a Catbird trying to induce the Finch to eat a worm it had brought for it. By dint of coaxing and feeding the wild bird, she finally induced it to come often to the window, and one day, as she sat on the porch, the Catbird brought a berry and tried to put it into her mouth. We have often seen sparrows come to the window of rooms where canaries were imprisoned, but it has uniformly been to get food and not to administer it. The Catbird certainly thus expressed its gratitude.

WORK AND PLAY IN THE GRADES.*

BY CHARLOTTE H. POWE,

Cheraw, S. C.

Birds, beasts, men, even plants, make use of their energies, then rest. Through all nature runs this rhythmic movement of activity and recuperation, work and play.

The child trainer must consider this and study each child to determine (1) kinds of work and play needed, (2) amount of each necessary, (3) their proper distribution and use.

The result of work chiefly is the development of the individual life as shown in actual work products and faculty power.

The results of play are those of social life, making for a cultivation of sympathy and social adaptiveness.

Work is necessary for the purpose of food-getting for body and mind. There is also a necessary phase of play—eating, rest, sleep, exercise. Necessary work and play make for the preservation of the individual and the race.

The problem of the means of existence solved, work and play become the pleasurable expression of individual tastes

and inclinations. Expressive work and play make for individuality and talent.

These elements—necessary and expressive work and play—are ever present throughout man's life; but the order of their predominance in child-training seems to be: necessary play, expressive play, expressive work, necessary work.

The proper distribution of work and play—especially of necessary work and play—will gain the best hygienic results for mind and body.

In the kindergarten the child's play becomes expressive. In the primary he begins his expressive work. The time at first should be equally divided between work and play, with a gradual growth of the predominance of work. These are the years of habit-forming. In the grammar grades strenuous work finds its true and dominant place. Habit has ripened into duty.

The relation of work and play is an important factor in determining course of study, grading, method, device, and discipline.

WORK AND PLAY IN ADOLESCENCE.*

BY PROFESSOR M. V. O'SHEA,

University of Wisconsin.

In play, energy runs out along the lines of least resistance, lines that represent the great fundamental instincts of the race. What the race has always done, the individual now does easily, naturally, pleasantly, spontaneously; he plays it, that is to say. But what is new and complex in racial action is difficult for the individual; the way of action is not ready formed for him; he must open up new avenues by his own efforts; these are the lines of greatest resistance, and to follow them the individual must work. Play unifies and solidifies personality; in work,

that is only drudgery, there is often disintegration of personality, because of the conflict of interest and authority. But yet a youth must work if he is to become adapted to the extremely complex environment into which he is born. Life is certainly more complex to-day than it was when the race was at the starting point. The crude instinctive actions which served well enough when things were simple are now wholly inadequate to successful living, and in some instances are hostile to the best success in life. The race is ever growing more

*Abstract of a paper read before the National Educational Association.

altruistic, and the scope of individual action must grow more restricted in a certain sense, in the sense that purely selfish deeds which characterize the early years of life must be more and more inhibited; the boy must observe the golden rule today more fully than his ancestors have. The sphere of knowledge is widening every day, and the adaptations to the world which this gives are growing more complex and intricate, but at the same time more perfect and desirable. And these higher phases of life must be mastered by effort; youth must work, that is to say, if maturity is to be happiest and most successful. Play gives mastery of only the simpler processes of living; the fundamental requisites are certainly gained in this way, but everything finer and more subtle and complicated comes only by diligent application, and that not voluntary and spontaneous in the start at any rate. Growth in the higher reaches is secured only by struggling; the tendency is to stop on the lower plane of development, where the fundamental instinctive activities suffice to keep body and soul together, and there must be constant pressure brought to bear upon the learner of life's ways to get him to ascend to the point which the race has reached in social, and intellectual, and ethical, and even physical living. The boy will not undirected, unaided, and unforced equip himself for the duties and privileges of life in civilized society by making his own the insight, and power, and skill, and control which history, literature, science and mathematics give; other and simpler things will appeal to him too immediately and seductively.

And what then is the doctrine? Youth climbs the mountain of life most naturally and in a sense most effectively by play, but the topmost point can be reached only by work; what is the golden mean? There is seen to be a harmonizing principle, when it recognizes that work becomes most effective when one has an end in view to attain by his efforts. If there is nothing but a blank wall ahead of him, his life will be miserable indeed. Work must always have a clear goal in sight toward which it tends, and this must be worth reaching. Mere drudgery for the sake of discipline alone disintegrates personality; kills initiation and

spontaneity; the activities it produces are always the results of force imposed from without. Drudgery which is not tributary to some useful end does not stir the inner life to noble impulses, it does not result in that organization of the being where all works together in harmony. And youth is the time of all others when things that receive any consideration must have a life relation; they must help to solve some of the problems that confront a mind opening up rapidly to the meaning and responsibilities of existence—problems of a social, and ethical, an intellectual, and a physical character. Anything which promises to be a guide to youth through the unknown country which it is entering will be mastered, no matter what effort is required to attain it. And herein lies the possibility of making work effective, of leading the adolescent boy and girl to apply themselves to tasks that are hard, and in themselves uninteresting and unattractive, but they lead somewhere. If the history and literature of the high school are made to illumine the dark places of the pupil's every day life; if the geometry gives his mind poise and stability in the midst of phenomena which would otherwise be distracting and unsettling; if the physics be made to interpret the real world of forces acting in the pupil's environment; if grammar be made wholly tributary to the right use of language in the every day needs of a student; in short, if the school leads the student to see the significance of the work that must be done for successful living, then it loses its aspect of drudgery, and the pupil will put forth his strength upon it, as he does so freely expend himself on his baseball, or his billiards, or his novels, and on other things which touch his life. One need have no fears in saying that a youth can not be led into participation in the highest life of the race without tremendous effort on his part; modern life is altogether too complex, too involved, to be mastered in a free and easy way. The youth who will not strain himself, who will not gird up his loins to do battle with ignorance and sensuality, will forever forfeit the happiness which comes from a broad, deep knowledge of the world, and a consciousness of a mastery over it. But the end of effort, of struggle, must always be the comprehen-

sion and conquest of one's self and the world to which he is related, and the youth must be made to see his progress

toward this end in his work, when all the powers of his being will become co-ordinated in the effort to attain it.

IDEAL PUBLIC SCHOOLS.

BY DR. ANDREW S. DRAPER,
President of the University of Illinois.

(Continued from the June number.)

The true test of a school is the extent to which the pupils do things for themselves because they like to do them. The amount of work each child does, the length of the course or the number of studies he takes, is not of so much matter as that he shall get interested in some things and do them for himself.

The greater number of children never become enthusiastic over anything. They lead only ordinary lives. Nothing quickens their souls or stirs them to real, high-minded effort. A teacher who can wake a child up and get him to working for something is a real teacher. Such a teacher will have learned that this cannot be accomplished by terrorizing the child, or by trying to shape the life of the child just like his own life. The work of the school must be of a kind which the child can like to do. If the child enjoys one kind of work better than another he should be encouraged most in the kind he likes best. Let him learn to like something; let him accomplish something, and in a little time he will like other and greater things.

PROBLEMS OF GRADED SCHOOLS.

The necessity of the close grading and the separation of pupils into different rooms in the large schools has certain disadvantages. When the younger pupils mingled with the older ones and heard them recite, they derived an advantage from it. They saw what was ahead of them, and often they were roused by it.

The fact that in the graded schools the grade above is the main judge of the work in the grade below, and that the greatest desire of the pupil is to pass into the next grade, has disadvantages as well as advantages. An ideal teacher will know what the disadvantages are

and make them as small as possible. He will do genuine and honest work without too much reference to the teacher in the next room. Thoughtful people who build schoolhouses will put an assembly-room into every house, where all may come together and get the good which comes from the general meeting. It seems practically impossible to do for the child what the schools are set to do, unless the pupils of different ages intermingle.

Probably the greatest danger to the public school system is that people who are able to send their children to private schools will become dissatisfied with the public schools and withdraw their children and their support from them. They find, in some cases, that the public schoolhouses are untidy or unhealthful, or that the public school teachers are too uncultivated for association with their children, or are unable to interest and instruct them. If this should become true to any great extent it would be a very serious hurt to the public schools, because the strongest point about them is that they are common to all, to the well-to-do and the rich as well as the poor. American people in comfortable circumstances will not pay twice for the education of their children without feeling much annoyed at the necessity, and they show less courage than they ought to show if they do not make a very vehement and effectual protest.

This trouble is to be rigidly guarded against. A schoolhouse which is not neat enough and healthful enough for a rich man's child is not fit for a poor man's child. A teacher whose personal appearance or whose ways are unpleasant or hurtful to a child from the home of cultivated people is unfit to have charge of a

child from any home. A teacher who cannot teach well-bred children is an offense to all children. The public schools are bound to be the best and most efficient there are, well worthy of all the homes they assume to serve.

SCHOOLS STEADILY IMPROVING.

It must not be assumed from what has been said that the writer thinks that the American public schools are poor, or that the teachers cannot teach. The public schools are, in general, better than they ever were before. The people are more intelligent; the standards are steadily advancing; the schools must steadily improve. The teaching force in our school system is far from ideal, but it is generally conscientious. The teachers advance wherever the conditions encourage them to do so. Where the people manage the schools upon principles which approach the ideal, the teachers improve in spirit and accumulate teaching power with great rapidity.

Ideal schools will result from the intelligence and the spirit of the people. People are not likely to have good schools unless they know the difference between good schools and poor ones. Even then they are not likely to have good schools unless they are very earnest about it. Wherever the people allow mere self-seekers to become members of school boards and let them appoint and promote teachers through favoritism, and in defiance of the advice of experienced pro-

fessional superintendents, the schools will be weak.

THE RESPONSIBILITY OF PARENTS.

If the people will generate enough civic energy to secure laws which will enable them to protect their children against incompetents, and true teachers against association and competition with the unworthy; if they will remember that laws do not execute themselves, but require executors who are truly ambitious for the best that can be obtained; then the schools will be likely to approach the ideal.

Wherever a teacher's tenure of position does not depend upon a true spirit and upon increasing expertness in teaching there are likely to be poor schools. In such cases there will be no standards, and the teaching will be reckless and unscientific. Jealousies will prevail among the teachers. It will be necessary to make rules covering almost every act to prevent the so-called teachers from doing harm. These rules will keep those who might be true teachers from doing good.

Wherever school boards will secure a capable and just superintendent and cooperate with him in a policy which will give every teacher the right to know that a higher position and better pay in the schools will surely reward a genial and steady spirit, and that increasing respect in society will as surely follow patience and thoroughness in work, the schools will certainly advance toward the best ideals.—*Youth's Companion*.

WHAT ARE FADS?

BY SUPERINTENDENT W. A. WHITING,
Elgin, Ill.

For some time I have been searching for the definition of a fad, and lest the program presented to you should lead somebody to cry "another fad," for the past few days I have redoubled my search. In this, the politicians have assisted me somewhat. Some of them have recently attempted to designate the fads in the public schools, and to define a fad. One candidate declared against German as a fad, until he was waited upon by representatives of a large German society, representing several thousand votes. When he learned the size of the vote they represented, he at once concluded that German is not a fad and ought to remain in the schools.

Another politician declares against physical training, ignorant of the fact that a strong society representing thousands of votes, is strongly in favor of this branch of education in the schools. Immediately he is converted and convinced that physical training is not a fad. An aspirant for political honors in a well-known state declares against nature study as a fad in the schools until he is advised that the farmers representing a constituency not to be despised, are in favor of this branch either under this name or under the name of elementary agriculture. At once said politician becomes an advocate of nature study in the schools. Wise is the politician who declares that he is firmly convinced that there are fads in the schools—though he has never visited a modern school—and judiciously refrains from specifying what they are and what should be eliminated.

Possibly we may define, then, as a fad something which a politician uses for a day, for campaign purposes. It is either this or some branch of learning which has no organized band of franchise-exercising people behind it. Will some kind statesman please enlighten us upon this subject, or cease from accusing the schools of being given over to fads?

That too many things are attempted and the essentials, whatever these may be,

neglected in some schools is doubtless true. But this is hardly a reason for saying that this is true of all schools. There are some school managers who are justified in standing aside like the ancient publican, and thanking God that they are not as other men, that their schools are not like those of other cities.

Many branches have wisely been added to our school curriculum. In making these additions school men and women should add wisely, and they should also eliminate wisely. It is as difficult to select what should go out as what should come in. The schools should make sure that a study has educational as well as utilitarian value. Domestic science may be of greater value to a girl than higher mathematics or German, but because German and mathematics are already in the schools is no very good reason why domestic science should stay out. And if it is deemed wise to study domestic science in place of higher mathematics or German or Latin, the cry of crowding by its introduction is only a boy's cry of "wolf" when there is no wolf.

Nor need the expense, as far as high schools are concerned, be greatly increased by the multiplication of studies. Ruskin said, "If you read this you cannot read that." We should select what is best in studies as well as in books, and remember if we study this it may exclude that for the time being, at least. But possibly agitation, and accusation, and fault-finding may do us good. David Harum's dog found a certain number of lively inhabitants good for him to keep him from brooding over the fact of being a dog. The schools cannot afford to ignore sensible public opinion, but they should be careful to distinguish between public opinion and political buncombe. Some criticism should be constructive, not all destructive.

Cæsar's march through Gaul was traced by the cities he destroyed, the fields he devastated and the houses he pillaged. The heroes of the twentieth century in expansion and in education will be those who build and not destroy.

who plant, not devastate; who found not pillage houses, whose course is to be traced by what they have erected, rather than by the ruin and the desolation they have wrought.—*The World Review*.

BY SUPT. F. LOUIS SOLDAN,*
St. Louis, Mo.

The charge is made that in many places public schools undertake to teach what is not necessary, to the neglect or disregard of the essentials of common school education. There is the widest possible difference in regard to the question, "What Is a Fad?" Anything on which stress is laid in excess of its real educational value and which for a time is overestimated is called a fad.

Drawing, music and manual training have frequently been called fads. They are not fads as long as they are limited to the elements of these arts. To give the child a knowledge of some popular song, to have the school open and close with music, does not seem open to objection. Drawing, as long as its object is the cultivation of the mind and eye in the elements of form, is a branch which is universally useful and may properly be considered a part of public education.

Any study or any alleged schoolroom practice will become a fad when exaggerated and carried beyond its true value. There are, however, practices which have appeared in the last few years, fortunately in a few places, to which the word "fad," "frill" or "fringe," which public opinion applies to them, properly belongs.

There are people to whom the love of the new in education is as strong as the love of fashion is in social life. Not enough discrimination is exercised in selecting from new plans and devices in teaching those that are wise and helpful. It is characteristic of most of the fads that they are launched into the world with the loud promise of important results, alleged to be easy of attainment by them at some future time, but no tangible results have flown from many of these innovations, heralded with enthusiasm and pursued with zeal.

Not a few of the errors called "fads" find their origin in the tendency of modern education to leave everything to in-

dividual judgment and caprice. Where the amount of educational work to be done at each stage in the child's school life has been definitely determined and fixed by a sensible course of study the teacher works with a feeling of no responsibility and concentrates his attention and thought on the solid school work. Where the course of study, however, is left to individual choice and caprice, instruction is liable to wander and include educational practices and devices which are ornamental rather than useful.

BY WILLIAM K. FOWLER,*
State Superintendent of Public Instruction,
Lincoln, Neb.

A school fad is a part or a line of school work with which one is not in full accord or sympathy, through ignorance of its purport or an account of an honest difference of opinion. It is a school-room innovation in the experimental stage. It is an advance breeze from the progressive educators of the Windy City. It is a perennial topic for a Chicago newspaper editorial. Fads vary in degree, in the elements of time and locality. They are different things in different times at different places. They have their exits and their entrances. Time alone proves their value or their worthlessness, and that which is righteously dubbed a fad will fade as a fashion of the hour. A fad's advocate is called a faddist. Faddists are of two kinds: zealots and advertisers. The former require protection, caution, sound counsel. The latter require exposure—long time! Fads are of two kinds, ephemeral and eternal, and mortal man, be he editor or educator, cannot always classify. A fancy today may be a fad tomorrow, a foible the next day, and, in the hands of some unbalanced enthusiast, a fool thing thereafter.

We do not now consider geography a fad, but the courtiers of Isabella of Spain said that subject was a fad with one Christopher Columbus. A half century ago the Spencerian system of penmanship was hailed as a fad; it was opposed because it was said to destroy individuality and character in penmanship. Today the vertical system is termed a fad and opposed for precisely the same reasons; but

*Abstract of a paper read before the National Educational Association.

the one had and the other has a mission to perform; each was a distinct step in advance; each received or will receive modification, but each systematized the work and called attention anew to a most important subject. Music is sometimes and in some places termed a fad. But the fifteen minutes daily of instruction in vocal music in the schoolroom has a distinct temporary and a permanent value—we may say it has a temporal and a spiritual value. Condemn sooner the two or three hours daily instrumental practice in the home. In many central states the consolidation of small rural schools and the transportation of pupils by public conveyance may be considered and is sometimes termed a fad, but it is a fad that will grow in favor as its advantages are better understood by the public. Whatever tends to improve the rural schools and to keep the boys on the farm should receive universal approbation, be it fad, fact or fancy. In Nebraska at present the elements of agriculture, including a fair knowledge of the habits and structure of the common plants, birds, insects and quadrupeds, is a fad, perhaps, but that great agricultural state will instruct its youth thoroughly in the causes and dependencies of its commonwealth. Dr. Soldan says that in a certain school loud reading has been abandoned altogether and silent reading has taken its place. On the other hand, in certain schools oratory forms a part of the high school course. Of the two evils, or fads, give us the latter. Fifteen county superintendents in my own state whose institutes I visited last month were unanimous in the opinion that reading was more poorly taught in the rural schools than any other subject. Give us back the good old-fashioned oral reading. The Boy and his Burning Deck, Marco Bozzaris and Emmet's Vindication. Send to the high school pupils who can read easily, pleasantly, expressively, pupils who have mastered the mechanics of reading, even though they may not have read all the great mass of English literature or all

the myths of ancient Greece. Drawing and elementary science are not fads, and they have a distinct economic value in industrial centers. Manual training in its various phases, domestic science, etc., may or may not be fads, according to local conditions. Extending the department store plan of the great universities and colleges down through the high schools into the grammar grades is, I fear, a dangerous fad. We lack the time and the public lacks the patience to wait for results in uncertain experimentation in the grammar grades. Less than one hour in eight is passed by the child in the schoolroom when he attends regularly throughout the school year. The average attendance would not equal one hour in twelve. Perhaps there are fads in the home, on the street, in society, that influence the child, for good or for ill. Society may train our youth for social functions, pink teas, and midnight revels, while the school is endeavoring to train for better citizenship. Our schools for delinquents and defectives are now striving to give each individual therein that equipment which will enable him to live an independent life in the world, and the public schools should do no less—they should do more; that which they do in the direction of developing and strengthening an earnest desire for better living, for honest labor, for higher citizenship, for independence, for self-reliance, is *not* faddism.

"God give us men! A time like this demands

Strong minds, great hearts, true faith
and ready hands.

* * * * *

Men who possess opinions and a will;

Men who have honor and who will not
lie."

Strengthen the will, develop purpose, build up character: these are not fads: the results will be a true measure of the success or failure of the public school system and its legal guardians.

THE MOVEMENT FOR MUSEUM EXTENSION.

BY RICHARD WATERMAN,

Secretary of the Chicago Bureau of Geography.

The keynote of many recent movements for popular education may be found in the word "extension." Leading institutions for higher education have organized the movement for university extension so as to reach students who are unable to do their work in residence; Boards of Education have provided for school extension courses in order to give to young and old an opportunity to study elementary and high school subjects at the most convenient time and place; libraries have developed a similar movement to place in homes of the people an abundance of literary material that would otherwise remain unused on the library shelves; and now museums are making an effort to extend the use of their collections, which represent the accumulated experience of mankind in every field of science, industry and art. How is it possible to carry on a movement for museum extension? The collections which are usually displayed in such institutions are very valuable and must be kept in heavy glass-covered cases and carefully protected from the injury that would result if they were handled by many people or transported from place to place. In spite of this difficulty there are many museums each of which have reached in its own field of work a satisfactory solution of this problem.

It is possible to prepare series of lantern slides that will aid in the teaching of a great variety of subjects and then send out a large number of duplicate sets for the use of teachers. This has been done by several institutions. In 1899 the Museum of Natural History in New York City supplied 22,500 slides to seventy-five cities and villages in New York state alone, and many additional slides to the public school authorities in other states; and the Regents' office in Albany pre-

sented 10,500 slides to the high schools of that state. In the previous year the Pedagogical Museum in Paris loaned 22,600 slides to schools of every grade throughout France and her colonies.

It is also possible to prepare traveling museums containing illustrative material selected and arranged by teachers who understand the needs of the schools and interpreted by a competent museum expert. These collections may be passed from one school to another, remaining in each long enough to give the teachers an opportunity to use such parts as will aid them in their work. The Commercial Museums in Philadelphia have performed this service not only for the schools of Philadelphia but for every county in the State of Pennsylvania.

The people of a community often become interested in some field of study that is not represented in their local museums, and this creates a desire to secure if possible a loan collection illustrating the subject under consideration. The National Museum and the Smithsonian Institution in Washington clearly recognize this fact, and from time to time they loan some of their duplicate collections to museums in other parts of the country. By this means material which they cannot possibly display in their own buildings are put into active service instead of remaining in the storehouse.

One of the most important fields of educational activity at the present time is that occupied by technical schools. These institutions aim to prepare their students for various lines of industrial and commercial work, and to give them a broad foundation for the special training which they must gain later for the work itself. It is, therefore, very desirable for these schools to secure collections of illustrative material representing all

of the natural products and each important industry of the leading countries of the world. The South Kensington Museum in London has a greater number of collections which are available for this purpose. They represent the industrial processes and products of England and many foreign countries, and are loaned to technical schools in all parts of the kingdom. They thus form an important part of the equipment of every school where industrial or commercial subjects are taught.

It has remained for Chicago, however, to gather up the various threads of the museum extension movement and establish in this city an institution whose aim it is to extend the influence of museums in every way possible—by means of lantern slides, traveling museums, scientific, industrial and commercial collections and loan exhibits illustrating the fine and industrial arts. The Bureau of Geography recently organized under the authority of the Chicago Principals' Association aims to do all of these things just as far as they will help teachers to give their pupils a better idea of the world as a home for man.

Webster says that "geography is the science which treats of the world and its inhabitants." The word may be used therefore as a general name for that body of material which includes not only the facts of physical and political geography as taught in the elementary grades, but also those larger groups of geographic facts—racial, industrial, social and commercial—which belong in the curriculum of the high school, the college and even the institution of university rank.

The material used by geography teachers includes not only books on geography but also maps, specimens, pictures, lantern slides and many other forms of objective illustration.

Teachers in the Chicago public schools find that a great deal of the illustrative material which they desire to use in teaching geography is already supplied by existing educational agencies. Among these may be mentioned:

(1) The Board of Education, which prescribes a set of text-books and provides certain maps and globes, reference books and supplementary readers, and

a small library of well-selected books for each elementary school; and for each high school a similar equipment, to which are added a small collection of specimens and the necessary materials for laboratory work.

(2) The Public Library, which places within the reach of every teacher and pupil a great variety of illustrated books and magazines.

(3) The Field Columbian Museum, which makes special provision for public school teachers and their classes to visit the ethnological and natural history collections which have placed this institution in the foremost rank of the great museums of the world.

(4) The Art Institute, which gives an annual ticket to every public school teacher, permitting her to visit with her pupils all of the exhibitions held at the Institute; and also devotes several of its galleries each fall to the display of the art work done in the public schools during the previous year.

(5) The Academy of Sciences, which opens its collections freely to pupils and teachers every day in the year.

(6) The Public School Art Society, which gathers the choicest examples of pictures and casts appropriate for school room decoration and loans them to the schools with a view to creating an intelligent public opinion in favor of surrounding the children with beautiful things while they are at work.

(7) The Projection Club, which gathers and loans to its members (including every public school in Chicago which owns a stereopticon) a great variety of lantern slides chosen with direct reference to the prescribed course of study.

(8) The Chicago Geographical Society, which maintains a lecture course each winter, to which the city teachers are invited; and publishes a series of bulletins on the geographic features of Chicago and vicinity.

(9) The American Bureau of Geography, which publishes a monthly magazine discussing questions of interest to students and teachers of geography, and containing the names and addresses of members of the American Bureau in all parts of the world who are willing to gather geographic material in their own

locality and exchange it for material of equal value gathered elsewhere.

The teachers recognize, however, that it is desirable to adopt some plan for concerted action so that each school may profit by the work done in arranging and interpreting collections for use in other schools. As soon as the Bureau was organized it became evident that for the classification and arrangement of material an exceedingly flexible system must be devised—one that would permit a teacher to select from a great variety of exhibits the particular specimens available for her use. The following plan was therefore adopted:

(1) Every book, map, picture, specimen and lantern slide is given an accession number as soon as it is received at the headquarters. This number furnishes an absolute means of identification.

(2) The interpretation of each exhibit is placed on a separate card and copies of these cards are loaned to members who borrow the corresponding exhibits.

(3) Exhibits which naturally belong in the same group are placed together and constitute a traveling museum, illustrating some one topic in geography. Members who desire to borrow one of these collections may apply in advance to have it assigned to them for a particular period in the school year. This method renders possible a systematic use of the collections.

(4) Exhibits which are not assigned to any particular collection may be borrowed separately.

The plan for arranging material in the form of traveling museums may be illustrated by the following example. When a sixth grade class in a certain school is ready to study the geography of the southern states their teacher can obtain from the Bureau collections illustrating each of the great industries and every important product of that section of the country. If she selects cotton as a typical product, she can obtain a collection and use; teachers of sewing will find it grows in the field and as it appears in each stage of its progress from the field to the factory. Accompanying this will be photographs representing the growing,

the harvesting, the ginning, the baling, the transportation and the manufacture of cotton. There will also be books, maps, pictures, magazine articles and lantern slides, each illustrating some important phase of the same subject and each calculated to help the pupils in their study of the southern states.

Or, she may select from the supplementary exhibits displayed at the headquarters whatever she desires to use. If a single specimen of cotton will serve her purpose, she need take but one. If she wishes a more complete collection, she can obtain it.

It is expected that when the work of the Bureau is fully developed, teachers of every grade, from the kindergarten to the university, will find in the collections something that will aid them in their work. The regular grade teacher will find a great wealth of geography material; teachers of cooking will find various food stuffs, such as wheat, rice, and Indian corn, and illustrations of the industries connected with their production and use; teachers of sewing will find the important textile fibers, such as cotton, wool and silk, and in each instance illustrations of the industries connected with the production of the raw material and its transformation into a variety of fabrics; teachers of manual training will find the building materials, such as wood, brick and iron, and illustrations of the related industries; and teachers of commercial and industrial subjects in the high schools and in the great technical schools of the city will find an abundance of material to illustrate their courses.

The co-operation of other Chicago institutions for public education has been invited and secured. The Field Columbian Museum has consented to aid the Bureau in preparing a series of traveling museums; the Board of Education has provided a complete set of the text books and supplementary readers used in the public, high and elementary schools; and the Chicago Academy of Sciences has given the Bureau the use of a large room as a temporary home until permanent headquarters can be secured somewhere near the center of the city.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A GUIDE TO THE TREES.

By Alice Lounsbury. Illustrated by Mrs. Ellis Rowan. This is a beautiful work, copiously illustrated with sixty-four colored and one hundred and sixty-four black and white plates. There are also fifty-five diagrams showing the structure and development of trees. The argument for issuing this work may be found in the author's introduction, "Trees are among the most familiar objects in nature, and among the most easily observed and studied; yet how few people know one from another or have an intelligent understanding of their life history." The life and habits of trees are so closely associated with those of the birds that we cannot refrain from advising every bird lover to become familiar with the trees and shrubs that are frequented by them. The admiration of trees in their stately grandeur is a delight to the eye and a rest to the mind. In this work may be found the "necessary amount of scientific knowledge," and yet the "character and recognized place each tree holds" in nature has not been neglected. About two hundred trees, and a few shrubs of Northeastern America, and a few of the rarer species of the South and West are included. (\$2.50. Frederick A. Stokes, New York.)

A GUIDE TO THE WILD FLOWERS.

By Alice Lounsbury. Illustrated by Mrs. Ellis Rowan. A most artistic volume by the author of "A Guide to the Trees," illustrated with plates in the colors of nature and numerous drawings of the fresh flowers in or near their homes. About five hundred plants are described in these pages, classified according to the kind of soil in which the plants grow. It is especially useful as a text-book for the instruction of beginners, as it employs no technical terms that it does not define and requires no other book to make it intelligible. In fact, it makes a delightful and handy companion in the woods, fields and roads, at the same time enjoyable to the botanist as well as the non-botanist. Dr. Britton says: "From a pedagogic standpoint nature studies are of the utmost importance, as they bring the mind to the consideration of the objective rather than the subjective methods." The sixty-four full page colored plates which are reproduced from original paintings by the illustrator are accurate and true to nature. (\$2.50. Frederick A. Stokes. New York.)

A PRIMARY HISTORY OF THE UNITED STATES.

"This book has been written in the belief that a primary history of the United States should be short, as interesting as possible, and well illustrated." These are the words of the author, John Bach McMaster, and the text shows that he has been successful in reaching his ideal. The illustrations of this attractive book are numerous, well executed and historically authentic. The narrative of events begins with the discovery of America by the Europeans and closes with the re-election of President McKinley in 1900. (60 cents. The American Book Company, Chicago and New York.)

A SPANISH GRAMMAR.

In view of the constantly growing importance of the relations with our Spanish-speaking possessions and neighbors, Samuel Garner has written this book, which will equip the student thoroughly with an accurate and ready knowledge of the language, both for reading and conversation. (\$1.25. The American Book Company, Chicago and New York.)

AN ENGLISH GRAMMAR.

This new text book for Grammar and High Schools is the product of an author, James M. Milen, who has not only given special attention to the subject treated, but has successfully demonstrated the value of his method and treatment by thorough, practical use in the schoolroom during his many years of experience as a principal and teacher. (75 cents. Silver, Burdette & Company, Chicago and Boston.)

EL CAPITAN VENENO.

The author of *El Capitan Veneno* is D. Pedro A. de Alarcon, who is one of the most popular of the modern Spanish writers. The editor is George Griffin Brownell, who has prepared this work in such a manner that it will prove a charming novelette for the student of the Spanish language. (50 cents. The American Book Company, Chicago and New York.)

ELEMENTARY ANATOMY, PHYSIOLOGY AND HYGIENE.

This volume of the New Century Series of Physiologies was prepared by Dr. Winfield Scott Hall, of the Northwestern University Medical School. It has the official endorsement of the Department of Scientific Instruction of the National W. C. T. U. In the preparation of this work Dr. Hall had in mind the instruction of the higher grammar grades, and as it is founded on the experimental method, which is so popular at the present time, it will be welcomed as one of our valued text-books. (75 cents. The American Book Company, Chicago and New York.)

ERRORS IN SCIENCE TEACHING.

Many of the common expressions used to designate scientific phenomena are either entirely erroneous or they are misleading because they give incomplete descriptions of the changes that take place. Such expressions are common in general conversation, are frequently heard in the class room and are not rare even in text books. Mr. C. Stuart Gager, of the State Normal College, Albany, N. Y., has written this book, of seventy-three pages, for the purpose of furnishing a manual explaining this erroneous use of words in science teaching. It will be a useful volume for teachers in our schools, who are obliged to teach different subjects with a small amount of time for preparation. (50 cents. C. W. Bardeen, Syracuse, N. Y.)

EXERCISE IN MIND READING.

This work, from the pen of Catherine Aiken, is intended to provide for busy teachers the exercises which she has formulated and used for the growth and development of those mental powers most needful to the student in acquiring knowledge—material,—viz., quickness of perception, concentrated attention and memory. (\$1.00. Harper & Brothers, New York.)

HISTORY OF EDUCATION.

This valuable manual of topical studies and questions in the History of Education was prepared by Mary M. Conway, whose experience as an instructor of training classes, in the Griffith Institute, has given her an experience eminently qualifying her for the preparation of such a work. There is a field for this book, for, as the author says: "In the professional training of teachers the History of Education has a recognized value." It is important that this subject should be properly studied. The time spent in training classes is necessarily limited. Such a manual as this one, which summarizes the facts of educational history, is very valuable and prevents, if properly used, the cramming of the mind with a mass of information that is often forgotten as soon as the final examinations are finished. This little manual may be used with any text on the History of Education. A valuable feature is the topic, "Suggested Reading." Under this

head are given a list of appropriate reference works. (50 cents. C. W. Bardeen, Syracuse, N. Y.)

HOW TO TEACH READING AND COMPOSITION.

This work is an aid to the teacher in preparing for the labor of training his pupils in both reading and in writing the English language. It will prove an aid to the student by guiding him in his search for knowledge in the writings of others. It will also assist in training him to express with clearness and grace that which he may know or feel. The quotations selected by the author, Dr. J. J. Burns, for study are the most suitable for the purpose. To some of these notes are appended and to others questions. There are useful suggestions to guide in the writing of essays on the selections read. (50 cents. The American Book Company, Chicago and New York.)

NEW EDUCATIONAL READERS. BOOK III.

A. J. Demarest and William H. Van Sickle are the editors of this synthetic and phonic word method of teaching reading. They have presented a new system of reading, embodying all the ideas of the Newer Education. In the presentation of the work nothing is forced upon the pupil, but everything is brought to him naturally and easily, and with a clearness and vividness of perception secured by the aid of admirable illustrations. The book is intended for the work of the second year and is devoted to the development of obscure vowels and the more important initials and terminals. (40 cents. The American Book Company, Chicago and New York.)

SPRINGTIME AND FLOWERS.

"Springtime and Flowers," by Mae Ruth Norcross, is a simple, attractive Elementary Botany. It is not a nature study help only as the scientific knowledge of flowers is always the basis for intelligent nature study. Three children go into the country for vacation, and learn of the flowers they gather in a pleasant, conversational way. But the teachers who use this as a supplementary reader before the children have acquired the knowledge in it from observation will make a mistake. Many of the illustrations are especially pleasing in artistic arrangement. (35 cents. Silver, Burdette & Company, Chicago and Boston.)

STANDARD LITERATURE SERIES.

We wish to congratulate the publishers of this series of the work of the standard authors on the excellence and success of their undertaking. The books are prepared for supplementary reading in the public schools and both the complete and the abridged selections are ably edited. The introductions, the explanatory notes and the suggestions for study are concise and sufficiently extensive to serve as a guide to the student. "They have taken great

works of fiction and poetry and so edited them as to omit what is beyond the comprehension, or what would weary the attention of children in the higher grades of elementary schools." The words of Commissioner W. T. Harris regarding one of the abridgments of Walter Scott will apply equally well to the other volumes. He says: "I would not have believed the essentials of the story could have been retained with so severe an abridgment. But the story thus abridged has kept its interest and all of the chief threads of the plot." To mention the names of some of the editors is a sufficient guarantee of the quality of the work. They are Dr. Edward Everett Hale, Dr. Edward R. Shaw, Dr. George A. Wauchope and Dr. William L. Felter.

Forty-six volumes of this series have been published. The American authors represented in the first twenty-four numbers are Cooper, Hawthorne, Irving, Longfellow, J. P. Kennedy and R. H. Dana, Jr. The selections from the English authors are taken from the writings of Tennyson, Dickens, Scott, Byron, Bulwer-Lytton and Swift. Victor Hugo's "Ninety-Three" forms number 18 of the series. The remaining numbers are miscellaneous selections from standard authors. (Single numbers, cloth, 20 cents; double numbers, cloth, 30 cents. University Publishing Company, New York and Boston.)

STORIES OF ANCIENT PEOPLES.

This volume, the latest addition to the series of "Electric School Readings," is simply an arrangement of sketches "which are well fitted to awaken a desire for further knowledge in regard to the civilization of the east." Not only is this work adapted to supplementary reading in schools, but also in the family circle. A useful list of reference books is appended, which will prove of value, as it contains the titles, with the author's names, of the best works up to the present time. (50 cents. The American Book Company, Chicago and New York.)

THE DISCOVERY OF THE OLD NORTHWEST.

James Baldwin is the author of this volume of the "Eclectic School Readings." He presents the early history of the "Old Northwest" in a pleasing style, especially adapted to young readers. The text consists of a series of sketches, the author selecting those "from the very large number of events and incidents that might have been related, which seemed to him most necessary to the interest and the continuous unfolding of the narrative." The illustrations are numerous and well executed. (60 cents. The American Book Company, Chicago and New York.)

Educational Articles in the October Magazines.

- "Bowdoin College and Its Early Worthies," James Main Dixon.....*American Illustrated Methodist Magazine*
 "College Honor," L. B. R. Briggs.....*Atlantic Monthly*
 "Famous British Writers," John de Morgan.....*Book World*
 "The College of the City of New York," Henry S. Dottenheim.....*Book World*
 "Introducing a Child to Books," Bertha Walters Tildsley.....*Book World*
 "Christian Art—Its Status and Prospects in the United States," Charles De Kay.....*Catholic World Magazine*
 "The Principles of Economic Geography," L. M. Keasbey.....*Columbia Political Science*
 "The Moral Sense," Isabel Gordon.....*Frank Leslie's Popular Monthly*
 "Books and Writers," Anna Parmly Paret.....*Harper's Bazar*
 "The New Psychology," G. Stanley Hall.....*Harper's Magazine*
 "Colonies and Nation," Woodrow Wilson.....*Harper's Magazine*
 "The Education of a Child from Eleven to Eighteen," Edward Howard Griggs.....*Ladies' Home Journal*
 "Speaking and Writing Correctly," Elizabeth A. Withey.....*Ladies' Home Journal*
 "The Boy at the Parting of the Ways," Margaret E. Sangster.....*Ladies' Home Journal*
 "The Child of Three and Over," Elizabeth Robinson Scovil.....*Ladies' Home Journal*
 "The Literary World," Alice E. Hanscom.....*Modern Culture*
 "The Universities of Europe," Douglas Story.....*Munsey's Magazine*
 "Congress and Anarchy—A Suggestion," S. C. T. Dodd.....*North American Review*
 "English and American University Athletics," John Corbin.....*Outing*
 "Thomas Carlyle," W. C. Brownell.....*Scribner's Monthly*
 "Herbert Spencer—The Man and the Philosopher," William Knight.....*The Bookman*
 "A French Government School from the Inside," John Mead Howells.....*The Century*
 "The Monastic Danger in Higher Education," H. W. Horwill.....*The Forum*
 "The Progress of Socialism," Franklin H. Wentworth.....*The Pilgrim*
 "The Philadelphia Commercial Museum," Richard A. Foley.....*World's Work*
 "The Progress of Science," R. S. Woodward.....*The Popular Science*

THE UNIVERSITY LAW SCHOOL

OF ILLINOIS.

ROSWELL SHINN, LL.D., Dean.

52 DEARBORN STREET,
CHICAGO

Offers unusual facilities for the study of the science of the law at a minimum cost and equips students for the successful practice of the profession.

It has an unexcelled faculty of eminent practitioners especially skilled in the field of their chosen subjects, who seek not to obtain personal gain but to impart desired knowledge.

It is always open for the admission of students, and has preparatory and post-graduate courses.

Correspondence solicited.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled. The word marked according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—E. E. McIntire, Superintendent of Schools.

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN & TEACHERS' AGENCY.

The South and West offer better advantages to aspiring teachers than any other section. THE SOUTHWESTERN TEACHERS

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to
CLAUD J. BELL, Proprietor.

TOKOLOGY Complete Ladies' Guide

By ALICE B. STOCKHAM, M.D.

Prepaid cloth, \$2.25; Morocco, \$2.75. Sample pages free. 500,000 sold. Lizzie M. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of 'Tokology.' Always saves pain—often saves life."

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago

TRUE MANHOOD

A manual of
SEXUAL SCIENCE
for young men.

By E. R. Shepherd.

Gives knowledge that leads to purity in thought, word and act, revealing truths with a chaste hand. Endorsed by the Y. M. C. A. and prominent ministers and physicians everywhere.

Atchison Baptist: "It tells what many parents do not know, and what more are afraid to tell." Levant cloth, 322 pp., postpaid, \$1.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago.

GREAT BARGAINS IN MAGAZINE CLUBS.

\$13.00 worth for only \$6.00

By special arrangement we are able to offer the Greatest Clubbing Bargains of the Season. THE MAGAZINES WILL BE SENT TO ONE OR DIFFERENT ADDRESSES.

BIRDS AND NATURE, 1 year	\$1.50	} \$13.00 worth. SEND US ONLY \$6.00 FOR ALL FIVE.
REVIEW OF REVIEWS (new), 1 year	2.50	
CURRENT LITERATURE (new), 1 year	3.00	
NORTH AMERICAN REVIEW (new), 1 year	5.00	
REVIEW OF EDUCATION, 1 year	1.00	

In place of REVIEW OF REVIEWS you can have NEW ENGLAND MAGAZINE.
In place of NORTH AMERICAN REVIEW you can have LESLIE'S WEEKLY.

Twelve More Great Offers. (The Club Price Pays for a Yearly Subscription to Each Periodical.)

Regular Price.		Club Price.
\$12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, Current Literature (new), Success	\$6.25
11.00	Birds and Nature, Review of Reviews (new), New England Magazine, Current Literature (new), Success	5.50
12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, New England Magazine, Success	6.25
12.50	Birds and Nature, Current Literature (new), Leslie's Weekly, New England Magazine, Success	6.25
6.00	Birds and Nature, Review of Reviews (new), Cosmopolitan, Success	4.00
6.50	Birds and Nature, New England Magazine, Success, Cosmopolitan	4.00
10.00	Birds and Nature, Leslie's Weekly, Review of Reviews (new), Success, Cosmopolitan	5.75
8.50	Birds and Nature, Leslie's Weekly, Success, Cosmopolitan, Leslie's Monthly	5.25
6.50	Birds and Nature, Leslie's Weekly, Success	4.25
5.50	Birds and Nature, Success, Cosmopolitan, Leslie's Monthly, Household	4.00
3.50	Birds and Nature, Success, Cosmopolitan	2.75
3.50	Birds and Nature, Success, Household	2.75

In place of Cosmopolitan and Leslie's Monthly in any of our offers we can send you Good Housekeeping, Designer, Ledger Monthly, Household, Pilgrim, American Mother, Recreation (new), Popular Science News (new), or Home Magazine of New York. If you are now a subscriber to Review of Reviews and wish to accept these liberal offers, you can add \$1.00 to the price of the combination. This will apply to Current Literature also.

Remember the Magazines will be sent to one or different addresses. The subscriptions may be either new or renewals, except those to Review of Reviews, Current Literature, North American Review, Recreation and Popular Science News, which must be new subscriptions.

Make Remittances and Address All Orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago.

THIS IS THE MOST GENEROUS OFFER EVER MADE BY AN EDUCATIONAL PAPER.

SCHOOL ROOM METHODS AND NATURE STUDY. Three Numbers. Each 25c.

Contents of Volume I. are given only in a general way. Those of 2 and 3 in detail. Each volume is profusely illustrated. Money refunded to anyone who is not satisfied.

CONTENTS OF NUMBER I.

Books helpful in Nature Study—Symposium on Nature Study—Pedagogic Aspects of Nature Study—Nature Study and the Teacher—The Outdoor Study of Geography—Plant Study—Seeds and Their Germination—The Study of Leaves—Flowers and Their Work.

The Study of Trees.

A Dozen Common Birds, Bird Study, Olive Thorne Miller.

Bird Day and Birds, John Burroughs; Our Common Insects—How to Study Their Life History and Habits (Illustrations for this article and the one on Mammals furnished by Prof. Lugger, most of them from his own drawings).—Selections from Literature to Accompany Nature Lesson, Sarah L. Arnold.

CONTENTS OF NUMBER II.

LESSONS AND EXERCISES FOR SEASONS.—Suggestions for Christmas Program—Christmas Bells—December in the Primary Room—Christmas History and Customs—Legend of the Chrysanthemum—In the Lands of Ice and Snow—In Esquimaux Land—Valentine's Day—Lincoln Exercises—Hour With Washington—Patriotic Day Program—Arbor Day Exercises—Trees and Their Uses—Growth and Structure of Trees—Arbor Day Program—Memorial Day—Stars and Stripes—Flag Raising Exercise—Balch's Salute to the Flag—Flag Raising Days—Outline of Bird Study—Flag Day Exercise.

NATURE AND CORRELATED WORK.—An Ingenious Contrivance—Cabbage Butterfly—Some Common Butterflies—Course of Study (Sarah C. Brooks)—Gentians (Correlated Lesson)—Outline for Correlated Work—Bird Life in Winter—Reading Lesson (1st grade) The Woodpecker—Related Lessons on the Sun—Study of Leaves and Birds—Observation of Trees—Report of a Field Lesson.

GEOGRAPHY—Study of a Brook Basin—A Field Lesson with Little Children—Mediterranean Cruise.

MISCELLANEOUS—A Word to Country Teachers—Art in School—Trials and Beauties of Winter—Aeolian Harp—Learning School Songs.

POETRY—God Bless Our Fatherland—Abraham Lincoln—The Nation's Sorrow—Washington—Hall Columbia—Birthday of Washington—God Save the Queen—Concord Hymn—Selection from Bryant—Twenty Miles Away—Ratisbon—John Henry Jones—Little Maid's Reply—Yankee Doodle—To Lincoln—Ode to Ethiopia—Patriot's Remembrance—Decoration Day—Starry Flag—Memory's Wreath—Our Country—Lovers for the Brave—Rest in Peace—An Offering to the Soldier—The Deserted Plantation.

BIRDS AND INSECTS—Cats' Claws, Who Has Counted Them—Jackdaw—Mrs. Wasp and Mrs. Bee—Crickets' Ball—How the Woodpecker Knows—Legend of the Birds—The Robins Sing in the Rain—Bob White—A Bird's Nest—Throstle—The Rabbit, The Lion, The Cat—The Tradesmen—Birds of Spring—The Jay—The Song of the Bee—The Butterfly—The Dead Pussy Cat.

FLOWERS AND PLANTS—Gentian—Fringed Gentian—Milkweed Pod—Golden Rod—Seed Cradles—How the Leaves Came Down—Corn—October Woods—Little Aster Service—Chrysanthemums—Flowers in the Window Sill—Buttercups and Daisies—Pussy Willow—Pussy Willow—The Alder Catkin—Leaves and Flowers—The Little Giant—Daisies—How Marigolds Happened To Be—Flax—Two Trains to Poppy Land—Old Fashioned Roses—Butterflies and Flowers—My Strawberry.

NATURE—Raindrops—The Bonny Bicycle—A Bowl of Honey—River Song—Suppose—The Sunbeam—Butterfly and Thistle-Bell—Little Drops of Water—Long Ago—Talking in Their Sleep—The Wind—The Wind—Joy for the Sturdy Trees—Forty Years from Now—In the Swing—Which Tree is Best—Discontented—Maple Tree—Whispering Pine—Planting the Tree—Tree Party—The Oak—Wayside Inn—Horse Chestnut—Plant the Apple Tree—Then It's Spring—The Cottonwood Tree—Little Brook—Little Snowflakes—Little Things—Waterproof Folks—The Heart of a Tree—The Critic—Plum Tree Dancers.

EXERCISES AND POEMS FOR SEASONS.—Harvest Exercise—Autumn—Autumn Song—Autumn—November—Down to Sleep—Thanksgiving—A Sober Month—Harvest Hymn—Thanksgiving, The Reason Why, Dot's Thanksgiving, Praise God, Little Paul's Thanksgiving, All Things Beautiful, We Thank Thee, Signs of Thanksgiving, Thanksgiving—Little Jack Frost—Landing of the Pilgrims.

CHRISTMAS POETRY—Yule Tide—Christmas Tree—God Rest Ye—Christmas Stockings—Santa Claus' Petition—Little Town of Bethlehem—Bird's Christmas—A Feel in Christmas Air—Christmas Carol—Hang up the Children's Stockings—Address to Santa Claus—Old Santa Claus in His Den—Snow Fairies—The Two Brothers—What the Winter Brings—Christmas Bells—Christmas Hymn—Children's Friend—Charity—A Christmas Secret—Christmas Carol—In Bethlehem of Judea—Old Janus—Winter for Boys—Patriotic Exercise—Between Winter and Spring—Spring Cleaning—Return of Spring—When the Green Gets Back on the Trees—April Days—The Months of Folly—Decoration Day—Memorial Day for Wee Ones—Memorial Flowers—Praise June—Effe's Thoughts—Thanksgiving—Snow—Jolly Old Winter—Sunshine—The Months.

MUSIC—Norwegian National Hymn—Swedish National Hymn—Bruce's Address—Battle Prayer—The Marseillaise—Good Morning—Salute to the Flag—Scale Studies—We Have Been Wandering—A Spring Song—Till We Meet Again—We Thank Thee—Sunbeams—In Merry Autumn Time—Lullaby and Good-night—Fairlyland—The Swallow and the Sparrow—Christmas Song—Thanksgiving—Flowers That Bloom—Trees in Winter—Air Fairies—Little Gardener—Good Morning—Bring Forth the Flowers—Vapor Song—Swallows—East Wind—The Good Die Not—Lullaby—Parting Song.

CONTENTS OF NUMBER III.

JANUARY—Solution and Crystallisation; The Eskimo; Lesson on Coal and Mining—Dr. Burroughs' Method—Kindergarten in Primary Room—Only To-day—Happy New Year; Don't Give Up; Winter Song; Procession of the Months; The New Year; What the Coal Says—Bed in Summer; A Useful Gift; A Norse Lullaby (a song); The Little Fir Trees; A Vain Regret; To the New Year—Illustrated Poem—The Pine Tree—Music of the Pines—Miriam (a story of a child).

FEBRUARY—A Boy's Remonstrance (poem)—Hurrah for the Flag (poem)—Meeting Washington (an anecdote)—Mount Vernon (poem)—The Study of Washington—Tributes to Washington—Exercise for Washington's Birthday—A Lincoln Program—The Bravest Battle (poem)—Memory Gems—Decorations and Programs—Patriotism for the Little Ones—Noted Birthdays in February—Washington Memorial Exercise—Dialogues—The Little Maid's Reply—Saint Valentine's Day—February (poem)—Paper Making—Birthdays—Something About Lowell—Memory Gems from Lowell.

MARCH—Classification in Country Schools—Memory Gem from Whittier—With the North Wind—Poetry, March; March; Mrs. Red Squirrel; Gaining Wings; Memory Gem from Clarence Urmey—Spring Lessons on Flowers—Program for One Week Spring Term—Poetry, Pussy Willow; One, Two, Three (a march song); Finding Fault; What Was It? Which One?

APRIL—Tree Planting (poem)—Arbor Day Thoughts—Arbor Day with Little Folks—An Arbor Day Collection—Arbor Day Exercises—The Oaks—The Lonely Pine Tree (story)—For Arbor Day (poetry), Planting Trees; The Tendril's Faith; An Arbor Day Tree; The Raindrops; Memory Gems from Smith and Cary; Planting a Cherry Tree—At Happy Easter Time—School Gardens—Escape at Bedtime (poem)—Memory Gems from Lowell.

MAY—A May Day Program—Program for Decoration Day—Quotations from Lowell—The Grand Advance (poem)—For Lincoln—Poetry, Lincoln's Favorite; Barbara Frietchie; The Flag; Great Men, Washington; George Washington—Patriotism—Flag Facts—Properties of Our Flag—The American Flag—Memory Gems—Poetry, Band of Mercy Hymn; A New Year; The Little Philanthropists—Correlated Lessons—Exercises in Sense Training—A Little Girl's Wonder (poem)—Memory Gem—An Afternoon with the Birds—Poetry, In the Orchard; My Strawberry; The Quickening of the Spring; Flower Song (music); The Malden and the Blue Bird; May Day; In Apple Tree Town; "A million little diamonds"; Memory Gem—Analysis of Bird Gems—Why Some Birds Hop and Others Walk—An Eye to the Birds—The Coyote and the Woodpecker—Foreign Lands (poem)—A Queer Bird (poem)—My Serenade (poem).

SEPTEMBER—September—Our New Teacher—First Day in Primary Room—Days of the Week—Jean Ingelow—Your Own Geography—Review Days—God Give Us Men—"Ill fares the land"—Common School Examinations.

OCTOBER—A Letter to Mother Nature—The Autumn Jewel—A Study of Columbus—At the Sign of the Goldenrod—A Walk with a Naturalist—Grasshopper Music and Verse—Little Bird, Little Bird.

NOVEMBER—Thanksgiving (Illustrated)—Jack O'Lantern; A "Bird's-Eye" View—Harvest Is Come; Thanksgiving—Thanksgiving; Thanksgiving Letter; The Cricket Fiddler; Eugene Field; Bedtime; The Bill of Fare—November Lessons: Lesson on the Squirrel; Lessons on Nuts; Lesson on Indians; Oral Number Work—Oral Number Work—Patriotic Thanksgiving Exercise—A Strange Plant—A Thanksgiving Hymn; Smile a Little; Memory Gems—Kindergarten Occupations in the Primary Room—November memory gems—A Talk on the Seed—Literature in the Primary Room—Hints on Map Making.

DECEMBER—Christmas Tributes from the nations—An Eastern Legend; To Prevent a Mistake; Christmas Joy; Where? A Christmas Eve Thought; Santa Claus—Beautiful Snow; Good Night—A Christmas Turkey (story)—The Bird's Christmas Dinner (story)—The Little Christmas Tree (poem)—Imitation Japanese (poem)—The Stockings (poem)—Piccola (a story)—Memory gems—Whittier Memorial: For Primary Grades—For Grammar Grades—A Whittier Exercise—Wordsworth's Attitude Toward Children—Memory gems—Norse Mythology—Australian Poetry; My Jack Frost; "New occasions teach new duties".

MISCELLANEOUS—Catkins (poem)—Use of Chalk in the Schoolroom—March, April, May—The Little White One; The Starry Skies; October; November; December; January; February; March; April; May—Our Common Cereals: Wheat, Rye, Barley—Poetry: Don't Give Up; Robert of Lincoln; One, Two, Three; Springtime Summons; To the Dandelion

PRIMARY SCHOOL LEAFLETS.

Volume I. The Sun, Photon, The Snow.—Our Flag, The Boy Washington, The Man Washington, Joan of Arc.—Winds.—Spring, Pussy Willow, Rain, Dandelion, Little Brown Seed.—Little Dandelion, What the Flowers Wished, The Violet, Anemone.—The Frog, Snail, Crayfish.—September Aster, Goldenrod.—Milkweed, Thistle, Ants, October.—The Mayflower, New Land, Fruit, Thanksgiving Squirrel.—The Madonna, The Stars and the Child, The Christmas Story.

Volume II. The Snowflake Fairies, The Snow, A Trip to Cloudland, The Star.—Abraham Lincoln.—The Little Hiawatha.—Hiawatha's Canoe, The Cary Tree.—More About the Cary Tree, The Young Soldier, Take Care, The Drummer-Boy's Burial, The Red and White Roses.—Story of Little Caterpillar, Caterpillar and Robin Redbreast, Sleepy Little Caterpillar, Little Butterfly.—The Ants and the Grasshopper, The Pea Blossom.—The Three Bears, The Pea Blossom concluded.—The Lion and the Mouse, Why Chipmunks Have Stripes.—The Christmas Bells.

Volume 2½. Little Red Riding-Hood and picture.—Little Cedric, adapted from In Storyland (Illustrated).—King Aeolus and the Bag of Winds.—The Easter Hare.—A Little Morning-Glory Seed.—Clytie (Illustrated): The First Dandelion.

Volume III. The Seedlings, Thistle Song, Goldenrod, The Apple Tree, The Milkweed.—Going Away, Little Jack Frost, The Grapes, The Anxious Leaf.—What the Squirrel Said, The Flowers Sleep, The Pumpkin, How Patsy Gave Thanks.—What the Christmas Tree Said, The Stars, The Birds' Christmas.—The New Year, The Snowflakes, In Eskimo Land.—Old Abe, The Snow Man.—March, Spring and Her Helpers, A Windy Story.—The Easter Lily, Tree Talk.—The Violet, The Thirtieth of May.—The Bees, The Dandelion's Birthday.

Volume IV. Quadrupeds, Called Fourpaws. It is a gem. It was edited by Nellie Walton Ford, author of "Nature's Byways." It treats, the Cat, Squirrel, the Fox, Lamb, Bear, Deer, Rabbit, Cow, Horse, Dog.

SPECIAL OFFER.

School Room Methods and Nature Study, 3 volumes, each 25c.....	\$.75
Primary School Leaflets, volumes 1, 2, 2½, 3 and 4.....	.45
Review of Education, 10 numbers.....	.60

Total.....\$1.80

All for \$1.50

YOU CAN'T AFFORD TO MISS THIS VERY SPECIAL OFFER.

A. W. Mumford, Publisher,
203 MICHIGAN AVENUE, CHICAGO.

FIVE NEW BOOKS

THE TREE BOOK.

BY JULIA E. ROGERS, Cornell University.

Ready about Dec. 1st.

12mo. About 350 pages. Price, \$2. Advance orders, \$1.

This book will be illustrated with the pictures from our Typical Forest Trees in Photogravure and will be the most beautiful and practical book on trees ever published. It will also contain 200 drawings and other illustrations.

Miss Rogers was science teacher in the high schools of Des Moines and Cedar Rapids, Iowa, and as an institute lecturer in Nature Study attained a prominent place among the educators of the state. In 1900 she was one of Prof. Bailey's assistants in the Cornell Summer School of Nature Study, and the two years following were spent in postgraduate study in Cornell University.

BIRDS OF LAKESIDE AND PRAIRIE.

BY EDWARD B. CLARK.

16 Colored Plates.

Ready Nov. 1st.

We have had so many calls for a popular bird book to be illustrated with our color plates reduced in size that we have decided to publish one.

Price, \$1. Orders received in advance of publication, 75 cents.

A Boy's Trip to Yellowstone Park.

BY OLIN D. WHEELER.

100 Illustrations.

Ready Oct. 1st.

This is a charming story, adapted for supplementary reading in schools. No one is more capable than Mr. Wheeler to write a delightful story about this most interesting region. Geography teachers will welcome it.

Price, 75 cents. Orders received in advance of publication, 50 cents.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Paritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergarten teachers through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity with terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 5½x8½ in. 75 cents.

BIRDS OF SONG AND STORY.

An Interesting Book on Familiar Birds, by JOSEPH GRINNELL, President of the Cooper Ornithological Club, of California.

Illustrated with 16 color pictures. Price \$1.00. Advance orders, 75 cents.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price : Two cents each assorted as desired; the 424 for only \$4.24; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

1 Nonpareil.
2 Resplendent Trogon.
3 Mandarin Duck.
4 Golden Pheasant.
5 Australian Parrakeet.
6 Cock of the Rock.
7 Red Bird of Paradise.
8 Yellow-throated Toucan.
9 Red-rumped Tanager.
10 Golden Oriole.
11 American Blue Jay.
12 Swallow-tailed Indian Roller.
13 Red-headed Woodpecker.
14 Mexican Mot Mot.
15 King Parrot.
16 American Robin.
17 American Kingfisher.
18 Blue-mountain Lory.
19 Red-winged Blackbird.
20 Cardinal, or Red Bird.
21 Bluebird.
22 Barn Swallow.
23 Brown Thrasher.
24 Japan Pheasant.
25 Bobolink.
26 American Crow.
27 Flicker.
28 Black Tern.
29 Meadow Lark.
30 Great Horned Owl.
31 Rose breasted Grosbeak.
32 Canada Jay.
33 Purple Gallinule.
34 Smith's Longspur.
35 American Red Crossbills.
36 California Woodpecker.
37 Pied-billed Grebe.
38 Bohemian Waxwing.
39 Long-billed Marsh Wren.
40 Arizona Jay.
41 Screech Owl.
42 Orchard Oriole.
43 Marsh Hawk.
44 Scissor-tailed Flycatcher.
45 Black-capped Chickadee.
46 Prothonotary Warbler.
47 Indigo Bird.
48 Night Hawk.
49 Wood Thrush.
50 Catbird.
51 Yellow-throated Vireo.

52 American Mockingbird.
53 Black-crowned Night Heron.
54 Ring-billed Gull.
55 Logger-head Shrike.
56 Baltimore Oriole.
57 Snowy Owl.
58 Scarlet Tanager.
59 Ruffed Grouse.
60 Black and White Creeping Warbler.
61 American Bald Eagle.
62 Ring Plover.
63 Mallard Duck.
64 American Avocet.
65 Canvas-back Duck.
66 Wood Duck.
67 Anhinga, or Snake Bird.
68 American Woodcock.
69 White-winged Scoter.
70 Snowy Heron, or Little Egret.
71 Osprey.
72 Sora Rail.
73 Kentucky Warbler.
74 Red-breasted Merganser.
75 Yellow Legs.
76 Skylark.
77 Wilson's Phalarope.
78 Evening Grosbeak.
79 Turkey Vulture.
80 Gambel's Partridge.
81 Summer Yellow Bird.
82 Hermit Thrush.
83 Song Sparrow.
84 Yellow-billed Cuckoo.
85 Ruby-throated Hummingbird.
86 House Wren.
87 Phoebe.
88 Ruby-crowned Kinglet.
89 Mourning Dove.
90 White-breasted Nuthatch.
91 Blackburnian Warbler.
92 Gold Finch.
93 Chimney Swift.
94 Horned Lark.
95 Yellow-bellied Sapsucker.
96 Warbling Vireo.
97 Wood Pewee.
98 Snow Bunting.
99 Junco.
100 Kingbird.
101 Summer Tanager.

102 White-fronted Goose.
103 Turnstone.
104 Belted Piping Plover.
105 Wild Turkey.
106 Cerulean Warbler.
107 Yellow-billed Tropic Bird.
108 European Kingfisher.
109 Vermilion Flycatcher.
110 Lazuli Bunting.
111 Mountain Bluebird.
112 English Sparrow.
113 Allen's Hummingbird.
114 Green-winged Teal.
115 Black Grouse.
116 Flamingo.
117 Verdin.
118 Bronzed Grackle.
119 Ring-necked Pheasant.
120 Yellow-breasted Chat.
121 Crowned Pigeon.
122 Red-eyed Vireo.
123 Fox Sparrow.
124 Bob-white.
125 Passenger Pigeon.
126 Short-eared Owl.
127 Rose Cockatoo.
128 Mountain Partridge.
129 Least Bittern.
130 Bald Pate Duck.
131 Purple Finch.
132 Red-bellied Woodpecker.
133 Sawwhet Owl.
134 Black Swan.
135 Snowy Plover.
136 Lesser Prairie Hen
137 Black Duck.
138 Wilson's Petrel.
139 Blue-Gray Gnatcatcher.
140 American Coot.
141 Ivory-billed Woodpecker.
142 American Sparrow Hawk.
143 Silver Pheasant.
144 Scaled Partridge.
145 Ovenbird.
146 American Three-toed Wood pecker.
147 Bartramian Sandpiper.
148 Nightingale.
149 Roseate Spoonbill.
150 Dickcissel.

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brannich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Ciceraria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany - (Cows).
- 343 Harvesting in the Great North-west.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 { New England Aster.
- 347 { Late Purple Aster.
- 348 Wild Yellow or Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 { Fringed Gentian.
- 354 { Closed or Blind Gentian.
- 354 { Tall or Giant Sunflower.
- 355 { Black-eyed Susan or Oxeye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowls.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-duck.
- 372 Red-breasted Sapsucker.
- 373 Promethean and Secropian Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Marrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel, Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein, Moth Mullein.
- 424 Medicinal Plant: Cocos Fruit.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these:

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man—what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. **THE REVIEW OF EDUCATION** contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. **THE REVIEW OF EDUCATION** does not seek to compete with its contemporaries, but rather to supplement them all.

2. **N. E. JOURNAL OF EDUCATION;**
Weekly; \$2.50 a year.

Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monroe, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.

3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**

Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.

4. **MODERN METHODS; \$1.00 a year.**

Our New Monthly.

The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.

5. **THE SCHOOL BULLETIN; \$1.00 a year.**

THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

Primary Education

For 1901-1902

Some Phases of Art in the Primary Schools

By Mr. Frank A. Parsons. "This course," says the author, "presents, as excuse for its existence, only this: A wish to make more general the knowledge of wherein beauty lies; and in awakening a love for it, by an acquaintance with its principles and their applications to lead to a desire for the acquisition of power to create and use the artistic for human enjoyment and benefit."

Seat Work

For the first time PRIMARY EDUCATION will give a series of seat work lessons, beginning in this issue. It will be combined with stories and the necessary illustrations will be given on the large monthly supplement. This will afford an individual model for each pupil of an ordinary sized class.

A Series on "What We Wear"

The history of everything the children wear, from a felt hat to a buckle ornament, will be told in a way to capture and hold the interest. Besides, the series will be illustrated with simple descriptive pictures that any teacher can reproduce upon the blackboard.

Literary Study for Busy People

By Mrs. H. A. Davidson. This course, in the brief outline that can be given here, will discuss the relation of literary study, that is, the intelligent reading of the best books, to growth and culture.

Illustrations

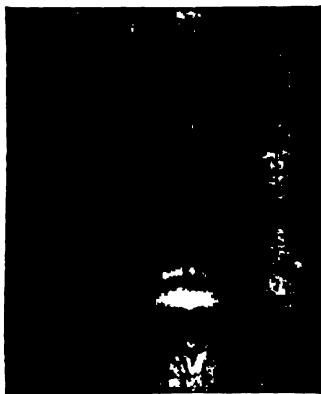
The pleasure and profit which the teachers have derived from the skillful illustrations of Miss Olive M. Long in the past will continue to be among the good things to come. Pictures have their own work to do in primary schools and Miss Long has helped us to the best.

Foreign Entertainments

The entertainments consist of glimpses of life in Puerto Rico, Cuba, Alaska, Hawaii and the Philippines. Songs and exercises, to be given by the children, descriptive of picturesque native scenes, customs, amusements, etc., are introduced with as much "local color" as possible.

In addition to these leading features, there will be the usual variety of interesting and instructive matter upon all subjects pertaining to primary work.

Price, \$1.00 per year.



Popular Educator

For 1901-1902.

Nature Study

Our department of Nature Study will be devoted more than formerly to the needs of the grade teachers who must work without elaborate equipment or extensive preparation. The lessons each month will be appropriate for the special season.

School-Room Helps

The editors of the POPULAR EDUCATOR have received so many appreciative letters regarding this department that it will be continued during the year.

Our History Series

Supt. W. A. Smith, whose articles on the subject during the past year have attracted much attention, will, in a series of articles on United States History, give practical and helpful advice to teachers on methods of work, conducting lessons, etc. These articles will be designed especially to help the grade teachers whose resources are limited.

Dr. Mara L. Pratt will also contribute to our history columns during the year.

Literary Department

The department of Current Thought will contain each month selections from the best educational articles found in the magazines of this or other countries.

Geography Lessons

During the year we shall publish a series of lessons for fifth and sixth year children, clear and definite in aim and in arrangement, and have been carefully planned and thoroughly tested in the school room.

Language and Grammar

A series of suggestive lessons for the different grades will be given, outlining a successful method of correlating the various elements of language work.

Entertainments

There will be short and easily arranged exercises for each month, and material furnished for observing all special days.

Art and Supplements

The art department next session will contain articles which may be easily used by the grammar school teacher. In October there will be an eight-page supplement containing entertainments, programs, memory gems, etc., suitable for Thanksgiving Day, and a similar one in January in connection with Washington's Birthday.

Send in your renewal this month and receive any one of the following, free: Portfolio of Animals, Portfolio of Presidents, Portfolio of Madonnas, Portfolio of Authors.

Price, \$1.00 per year.

OUR NEW PORTFOLIO ANIMAL LIFE

BY FAMOUS ARTISTS

This new addition to our popular series of Portfolios contains reproductions of the following masterpieces, size 9x12, printed on exceptionally heavy glazed paper.

MORNING GREETING	Swinstead
FELINE AFFECTION	Bradley
MATERNITY	Debat Ponsan
THE SHEEPFOLD	Jacque
AN OLD MONARCH	Bonheur
ON THE FARM	Dupre
CONNOISSEURS	Landseer
(Portrait of Landseer)	
PHARAOH'S HORSES	Herring
HIGHLAND SOLITUDE	Roe
AT THE WATERING TROUGH	Dagnan-Bouveret

Price, 50 cents, postpaid.

Total list price, \$2.50; will be sent for \$1.75.

USE THIS BLANK.

Educational Publishing Co.
378 Wabash Avenue, Chicago.

Enclosed please find \$1.75 for which send POPULAR EDUCATOR and PRIMARY EDUCATION for one year, with portfolio of Animal Life, to the following address:

Name

P. O. State.....

Street address

NEW PUBLICATIONS

WAKEMAN GENEALOGY.

A complete history of the Wakeman family and collateral lines in England and America.

8vo. 434 pages. Fully illustrated with half tones on fine coated paper; text on antique wove book. Cloth, \$5.00; Half Morocco, \$7.50; Full Morocco, \$10.00. Postage, 21 cents extra.

ATWATER GENEALOGY.

A complete history of the Atwater family and collateral lines in England and America.

8vo. 492 pages. Profusely illustrated with half tones and line cuts, printed on extra fine book paper. Cloth, \$5.00; Half Morocco, \$7.50; Full Morocco, \$10.00. Postage, 21 cents extra.

Advance orders are now being received for
the NEW EDITION of

The History of the Colony of New Haven,

BY REV. E. E. ATWATER.

The first edition, published in 1881, is now entirely exhausted. The new edition will be limited to about the number of orders received. Full particulars and order blank sent on application to the publishers.

THE JOURNAL PUBLISHING CO., - Meriden, Conn.

LESSONS IN ENGLISH.

FOR GRAMMAR GRADES.

BY GEORGE R. WINSLOW.

These lessons were written to meet the needs of actual class room work and have been in use five years.

The author believes that technical grammar can be best taught and the best interest obtained by applying it to extracts from standard authors.

The lessons are progressive and complete.

Teachers of grades six to nine will find in this book just the aid they need.

Price, 15c each; 6 or more, 12½c each; 50 or more, 10c each; by mail, postage prepaid.

LESSONS IN GEOGRAPHY.

BY GEORGE R. WINSLOW.

Geography changes to keep pace with history. Here is a book of 565 questions suitable for use in review work of any grade above the fifth.

They are for use in connection with any standard text and are up-to-date.

Price, 15c each; 6 or more, 12½c each; 50 or more, 10c each; by mail, postage prepaid.

QUESTIONS IN THE METRIC SYSTEM.

Price, 10c each; 6 or more, 8c each; 50 or more, 5c each; by mail, postage prepaid.

SPECIAL OFFER.

We believe that a large share of the teachers who examine these books will introduce them into their schools. In order that every teacher who so desires may see how valuable the books are as aids in their school work, we will mail one copy only of either for only 5c, or one of each for 10c and even this small amount will be refunded if requested when you send an order for a supply of the books for your school. You can not afford to do without them.

JOHN WILCOX, Box 823, Milford, N. Y.

American Education.

From Kindergarten to College.

NEW SERIES OF
NEW YORK EDUCATION,

\$1.00 PER YEAR.

...C. E. FRANKLIN, Editor....

THE growing circulation and influence of NEW YORK EDUCATION outside of the Empire State make it imperative that the scope of that splendid educational journal be enlarged, and hereafter it will be designated by the name

....American Education....

FROM KINDERGARTEN TO COLLEGE.

While the general policy and essential characteristics of the magazine will not be changed, it will be made a journal of equal interest to teachers everywhere. The interests of New York State teachers will be looked after with the same fidelity that has heretofore made NEW YORK EDUCATION unique and invaluable to them.

A postal card mailed to this office will bring you a sample September number as soon as it comes from the press.

NEW YORK EDUCATION CO., 81 Chapel St., Albany, N. Y.

Good Literature For Almost Nothing

The Northern Pacific is noted among railways for its advertising matter. Its pamphlets, folders, booklets, etc., are tastefully gotten up and are valuable for what they contain. Here is a partial list of what MR. CHAS. S. FEE, General Passenger Agent, St. Paul, Minn., will send out, carefully mailed, upon receipt of prices given. Any combination can be made, and money or express orders, silver or stamps will be accepted. This is a fine opportunity to obtain good descriptive reading matter for little or nothing.

WONDERLAND 1900—

An annual publication, beautifully illustrated in color and half tone. This number treats particularly of the history of the Northern Trademark, the Pacific's Custer Battlefield in Montana, and the Yellowstone Park.

Send
Six Cents.

MINIATURE WONDERLAND—

A neat and dainty publication containing a complete history of the Northern Pacific Trademark. The artistic covers of the Wonderland 1901 are used in miniature.

Send
Four Cents.

WILD FLOWERS FROM YELLOWSTONE—

A book of pressed wild flowers from Yellowstone Park, showing the real flowers in their natural colors. A dainty and beautiful souvenir—ten specimens of flowers and six full page illustrations of Park scenery.

Send
Fifty Cents.

YELLOWSTONE NATIONAL PARK—

A new 112-page book in strong, flexible covers, good paper, plain type, illustrated, pocket size, a compendium and descriptive of World's Wonderland.

Send
Twenty-five
Cents.

CLIMBING MOUNT RAINIER—

An illustrated pocket-size book, 72 pages, in strong flexible covers, printed on heavy paper, descriptive of an ascent of the highest peak in the United States—outside of Alaska—of a glacial nature.

Send
Twenty-five
Cents.

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—REVIEW OF EDUCATION one year and a complete set of these Trees for only \$1.50.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color,

The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

For That Tired Feeling in a School Boy Give



IT KEEPS
SCHOOL LIFE MOVING
WITH THE
MOTION OF THE WORLD

"A Juvenile Review of Reviews"

If education be a preparation for the business of life, then every child should also, from the beginning, have daily experience of this fact.

—Herbert Spencer.

Subscription \$1.50 per year. With REVIEW OF EDUCATION, \$2.00 per year. Send two-cent stamp for sample copy.

Beautifully Illustrated with Maps, Portraits,
Line and Wash Drawings, and Reproductions of Paintings ❖ ❖ ❖ ❖ ❖

A. W. MUMFORD.

203 Michigan Ave., Chicago.

To THE **DAN AMERICAN**
EXPOSITION
AND
NIAGARA
FALLS.



THE WABASH
Has its own rails
and is the short-
est line to
BUFFALO
AND THE
FALLS.
Stop-overs given
at both points on
all tickets.

For Descriptive Matter, Rates, etc., call on nearest
Ticket Agent, or address
C. S. CRANE, Gen'l Pass'r and Ticket Agent, ST. LOUIS,
or F. A. PALMER, Ass't Gen'l Pass'r Agent, CHICAGO.

ONLY \$50.00 TO CALIFORNIA AND
RETURN.

General Convention Episcopal Church, San
Francisco, Cal., Oct. 2, 1901.

For this meeting the Chicago Great
Western Railway will on Sept. 19 to
27, sell through excursion tickets to
San Francisco, good to return Nov. 15,
1901, at the low rate of \$50.00 for the
round trip. Rates via Portland, Ore.,
\$9.00 higher. Stop-overs allowed.
For further information inquire of any
Great Western Agent or J. P. Elmer,
G. P. A., Chicago, Ill.

AMERICA'S MOST POPULAR RAILWAY
CHICAGO
AND
ALTON
PERFECT PASSENGER SERVICE

BETWEEN

CHICAGO AND KANSAS CITY,
CHICAGO AND ST. LOUIS,
CHICAGO AND PEORIA,
ST. LOUIS AND KANSAS CITY.

THROUGH PULLMAN SERVICE
BETWEEN CHICAGO AND

HOT SPRINGS, Ark., DENVER, Colo.,
TEXAS, FLORIDA, UTAH,
CALIFORNIA AND OREGON.

IF YOU ARE CONTEMPLATING A TRIP, ANY POR-
TION OF WHICH CAN BE MADE OVER THE CHICAGO
& ALTON, IT WILL PAY YOU TO WRITE TO THE UNDER-
SIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

The
Pioneer
Limited.

Famous
Train
of
the
World.

CHICAGO-ST. PAUL-MINNEAPOLIS

VIA

The St. Paul Road.

(Chicago, Milwaukee & St. Paul Ry.)

Equipment and Service
Unequaled.

Time tables, maps and information
furnished on application to

F. A. MILLER, General Passenger Agent,
Chicago, Ill.

Big 4 Route

BEST LINE FROM THE

North, Northwest and West

TO

INDIANAPOLIS
CINCINNATI
LOUISVILLE

AND ALL POINTS

South and Southeast

For maps, rates, etc., address

W. J. LYNCH, G. P. & T. A.
CINCINNATI

Tours in the Rocky Mountains.

The Denver & Rio Grande and the Rio Grande Western offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the transcontinental traveler the grandest scenery. Two separate and distinct routes through the Rocky Mountains, all through tickets available via either. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman palace and tourist sleeping cars between Chicago, St. Louis, Denver, San Francisco and Los Angeles, and Denver and Portland. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gateway." Dining cars (service ala carte) on all through trains. Write S. K. Hooper, G. P. & T. A., Denver, Colorado for illustrated descriptive pamphlets.

Your reply to my inquiry concerning the back numbers of the "Child Study Monthly" is at hand, and you will find an order for \$6.00, the price named for the sixty-two back numbers, enclosed. Kindly send them at once.

NINA C. VANDEWALKER.

Milwaukee, Wis., Sept. 27, '01.

New Wabash Equipment.

THE Wabash Railroad has just received and placed in service on its lines running out of Chicago the following new equipment: Eight combination baggage and passenger coaches, thirty palace day coaches, ten reclining chair cars, three cafe cars and two dining cars. The majority of these new cars are seventy feet in length, and fitted with the latest style wide vestibules. They have six wheel trucks with steel wheels. The cars are finished in the finest selected Jago mahogany. The lighting is by Pintsch gas with the exception of the cafe, dining and some of the chair cars, which are unusually well lighted by electricity, the fixtures being especially designed for these cars. The dining-cars will seat twenty-nine persons and have ample kitchen space. The cafe cars will seat eighteen persons in the cafe, and have a library and smoking-room in the observation end of the car which will seat fourteen persons. These cars also contain a private cafe with seating capacity for eight persons. These new cars represent the highest stage of the development of modern car building. Nothing has been omitted and no expense spared that would add to their luxurious elegance, or to the comfort and convenience of the patrons of the Wabash road.

No line is now better equipped than the WABASH for handling business to the Pan-American Exposition. Write for a copy of Pan-American folder containing a large colored map of the Exposition grounds and zinc etching of the principal buildings.

F. A. PALMER, Asst. Gen. Pass. Agt.,
CHICAGO, ILL.

NEW BOOKS

Spelling and Word-Building

By EUGENE BOUTON

Superintendent of Schools, Pittsfield, Mass.

The plan of the book is original. Words are taught as individuals. Pictures tell their meaning to the eye. Word-building exercises teach the phonetic laws that control the spelling of regular English words. First reader word only. Over 250 illustrations. (In Pre

Standard Literature Series

No. 46. **Grandfather's Chair**, Hawthorne. A historical narrative of unusual interest for boys and girls. Numerous illustrations appropriate to the story.

No. 47. **The Courtship of Miles Standish and Other Poems**, Longfellow. Thirty-three complete poems. With biographical and critical introduction by Professor Wauchope. Illustrated.

No. 48. (July) will be **Some Famous Poets**. Poems of Goldsmith, Gray, Burns, Cowper, Wordsworth.

Gildersleeve-Lodge Latin Series

Selections from the Elegiac Poets, by Jessie B. Carter, Princeton University.

Cicero, De Officiis, Book I, by F. E. Rockwood, Bucknell University.

Cicero's Second Philippic, by E. G. Sihler, New York University.

Caesar's Gallic War, **Virgil's Aeneid**, and a new **Latin Exercise Book** will soon be added to the Preparatory Series.

Maury's Elementary Geography

Revised and enlarged. 120 pages. Study begins at pupil's home. The earth as a unit and as the home of man. Homes and peoples in color, full pages. Colored continental relief maps. The numerous illustrations from photographs. Each picture teaches a definite idea.

University Publishing Co.

NEW YORK

BOSTON

NEW ORLEANS

THE REVIEW
OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. NO. 4.
WHOLE NUMBER 66.

CHICAGO, NOVEMBER, 1901.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment	121
The Love and Study of Nature—a part of Education, Dr. G. Stanley Hall	129
The Religion of a College Student, Prof. Francis G. Peabody	136
Schools of Commerce	136
Household Occupations in Primary Grades, Katherine B. Camp	138
Co-Operative School Government.....	142
The Ideal Education, Colonel Francis W. Parker	143
The Swallow-Tailed Indian Roller. [Illustration]	144
The Red Wing Blackbird. [Illustration].....	145
Anarchy and the Public Schools, Prof. H. Vincent O'Shea	146
The Educational Ideals of Leland Stanford, Dr. David Starr Jordan.....	149
American Artists in the Schoolroom, G. D. C.....	150
The Personality of the Teacher, Helen L. Grenfell.....	152
University-Trained Teachers for Grammar Schools	155
The Educational Value of Natural History Museums, Frank Collins Baker	155
Book Reviews	158
Educational Articles in the November Magazines	160

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

New York Office, 1135 Broadway

Entered at Chicago Post Office as Second Class Matter.

Colored Supplement, Swallow-Tailed Indian Roller and Red-Winged Blackbird, with this number.

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly).....	\$1.00 "
American Primary Teacher (Monthly).....	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly).....	\$1.50 "
N. E. Journal of Education (Weekly).....	\$2.50 "
Journal of School Geography (Monthly).....	\$1.00 "
Educational Review (Monthly).....	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

HOLIDAY BOOKS.

A B C Book of Birds

for children large or small

BY

MARY CATHERINE JUDD

with nonsense rhymes for little ones
and prosy sense for older ones.

26 colored plates.

Price, \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

A. W. MUMFORD, Publisher,
303 Michigan Avenue, Chicago

The Jingle Book of Birds

By EDWARD B. CLARK.

16 Colored Plates.

Price, 50c.

This book of jingling bird verse with its 16 colored plates of beautiful and characteristic birds will be certain to capture the children and to hold the attention and interest of the elders. The author is well known to bird lovers throughout the United States by his field sketches of bird life. Mr. Clark, in selecting the birds which are to illustrate his verse was careful to choose only those whose names, plumage and characteristics are such as to lend themselves readily to the motive of the verse. The lines are not jingles merely but jingles which have a well rounded purpose and much of pith and point. The color scheme of the cover of The Jingle Book of Birds will be strikingly beautiful. The younger ones, and the older ones, too, for that matter, will be delighted with this book for a Christmas gift. The author is intimately known to thousands of readers by the articles from his pen which have appeared several times a week on the editorial page of the *Record-Herald* for a long time past.

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago.

The Young Citizen

A Magazine for Schools as well as
Teachers

SUITED TO ALL GRADES

New and Original Reading Matter with
Music and Busy Work

ONE BOOK FOR MANY

A whole School supplied with Supplemen-
tary Reading at a Price usually
spent on One Grade

SPECIAL OFFER TO COUNTRY SCHOOLS

Send for Sample Copy

The Young Citizen Publishing Company
CEDAR FALLS, IOWA

BIRDS OF LAKESIDE AND PRAIRIE

By EDWARD B. CLARK.

16 Colored Plates. Price, \$1.

THIS book will contain field sketches of bird life in the great middle west. Mr. Clark for years has been a close student of nature in a section of the country where wild bird observers have been many and bird writers have been few. The author takes his readers afield with him and puts them in close touch with our feathered friends of lakeside, woodland and prairie. The bird byways of Illinois, Indiana, Michigan, Wisconsin and other great middle western states are thoroughly explored. Mr. Clark is known to the reading public through his many bird articles which have appeared in the Chicago Tribune, and in the different magazines of the country. He is perhaps still more intimately known to middle western readers by the articles from his pen which have appeared several times a week on the editorial page of the Chicago Times-Herald, now the Record-Herald. The colored illustrations in "The Birds of Lakeside and Prairie" will be from our colored plates slightly reduced in size. Mr. Clark's work is characterized by a fine literary style.

A. W. MUMFORD, Publisher,

203 MICHIGAN AVE.,

CHICAGO.

IF NOT A SUBSCRIBER

To AMERICAN EDUCATION

Then let us send you a sample copy at once. A postal card addressed to us will bring you a free copy by return mail. If you give our magazine a trial you will be convinced of its superior merits. To both new subscribers and old subscribers to AMERICAN EDUCATION who renew, we make these offers:

American Education.....	\$1.00	} All for \$2.75
Review of Reviews (new subscribers only) ..	2.50	
Success	1.00	
Rand, McNally & Co.'s Atlas .....	.50

American Education.....	\$1.00	} All for \$2.25
Teachers' World.....	1.00	
Success	1.00	
Rand, McNally & Co.'s Atlas.....	.50	

Popular Educator, Primary Education, School Bulletin, or American Primary Teacher may be substituted for the Teachers' World.


American Education.....	\$1.00	} All for \$2.25
Rand, McNally & Co.'s Atlas .....	.50
Success	1.00	
Cosmopolitan	1.00	


Frank Leslie's Popular Monthly, The Household, Good Housekeeping, or The Designer may be substituted for the Cosmopolitan.

ORDERS MUST BE SENT DIRECT TO THIS OFFICE.

New York Education Co., 81 Chapel St., Albany, N. Y.

THE TEACHER'S TOOL-CHEST

 No mechanic could get employment as a skilled workman unless he possessed a well-stocked **Tool-Chest**. Let this catalogue be kept at hand for reference when you find that you need tools in your trade.

 Those starred (*) are published in The Standard Teachers Library, and may also be had in manilla at 50 cts. each. Those marked with two stars (**) are in cloth, but may also be had in paper at 15 cts. Those marked with a dagger (†) have been chosen by the State Superintendent for the New York State School Library. Those preceded by (T) are specified for use in New York training classes.

Subscribers to *Birds and Nature* or *Review of Education* may order books except **Well's Writing Books**

from this list at 33 1/3 % discount and they will be sent prepaid.
Send all orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago, Ill.

Books of Reference

(T) *Sonnenschein's Cyclopaedia of Education*, \$3.75.
Knott's Ready Reference Law Manual, \$2.00.
Bardeen's Verbal Pitfalls, 75 cts.
Lawrence's Classified Reading, \$2.00.

The History of Education

† Williams's History of Modern Education, \$1.50.
*† Quick's Educational Reformers, \$1.00.
Bardeen's Dictionary of Educational Biography, \$2.00.
— Note Book of the History of Education, 50 cts.
† Mark's History of Educational Theories in England, \$1.25.
Bremner's Education of Women in Great Britain, \$1.50.
Bennett's History of Pedagogics, 50 cts.
Browning's Short History of Education, 50 cts.
Hallmann's Sketches from History of Education, 20 cts.
Uniform Questions in History of Education, 25 cts.
† Donaldson's History of Education, \$1.00.
Lane's Elementary Greek Education, 50 cts.
† Cadet's Port Royal Education, \$1.50.
Milne's Teachers Institutes, Past and Present, 25 cts.
Grant's Burgh Schools of Scotland, \$3.00.
Stevens's High School of Edinburgh, \$2.00.
Barbera's Educational Publications in Italy, 25 cts.
Bardeen's Educational Journalism in New York, 40 cts.
— Educational Journalism—an Inventory, 25 cts.
Smith's Schools of Syracuse, N. Y., \$3.00.

Descriptions of School Systems

† Zimmern's Methods of Education in the United States, \$1.00.
Page's Graded Schools in the United States, \$1.00.
Bramwell's Training of Teachers in the United States, \$1.25.
Burstall's Education of Girls in the United States, \$1.25.
*† Bardeen's Roderick Hume, the New York Teacher, \$1.25.
— *† Commissioner Hume, a story of N. Y. Schools, \$1.25.
*† Riddle's Nicholas Comenius, ye Pa. Schoolmaster, \$1.50.
*† Grasby's Teaching in Three Continents, \$1.50.
State Education for the People, \$1.25.
Bennett's National Education in Europe, 15 cts.
Arnold's Reports on English Schools, \$2.00.
A Day of my Life at Eton, \$1.00.
† Parsons's Prussian Schools, \$1.00.
— † French Schools, \$1.00.

Biographies of Noted Educators

Bardeen's Dictionary of Educational Biography, \$2.00.
*† (T) Quick's Educational Reformers, \$1.00.
Hallmann's Luther, Bacon, Pestalozzi, Pére Girard, Diesterweg, and Froebel, 20 cts.
*† Carlisle's Memoirs of Ascham and Arnold, \$1.00.
Metkielejohn's Life of Dr. Andrew Bell, \$1.00.

* George Birkbeck, Pioneer of Popular Education, \$1.50.
† Harris's Horace Mann, 50 cts.
Monroe's Henry Barnard, 50 cts.
Portrait of Edward A. Sheldon, for framing, \$1.00.

John Amos Comenius

Portrait of Comenius, for framing, \$1.00.
*† Laurie's Life and Works of Comenius, \$1.00.
The Orbis Pictus of John Amos Comenius, \$3.00.
Butler's Place of Comenius in Education, 15 cts.
Maxwell's Text-Books of Comenius, 25 cts.
Quick's John Amos Comenius, 15 cts.

Life and Works of Pestalozzi

Portrait of Pestalozzi, for framing, 25 cts.
*† DeGuimps's Pestalozzi: his Aim and Work, \$1.50.
† Pestalozzi's How Gertrude Teaches her Children, \$1.50.
— *† Letters on Early Education, \$1.00.
† Rooper's Object Lessons, or Words and Things, 50 cts.
Hoose's Pestalozzian Arithmetics, Parts I, II, \$1.00.

Froebel and the Kindergarten

Portrait of Froebel, for framing, 25 cts.
† Autobiography of Friedrich Froebel, \$1.50.
Letters of Friedrich Froebel, \$1.50.
Hanschmann's The Kindergarten System, \$2.00.
† Shirreff's Kindergarten System, \$1.00.
† Essays on the Kindergarten, \$1.00.
† Marenholz-Buelow's Child and Child-Nature, \$1.50.
† Perez's First Three Years of Childhood, \$1.50.
† Hallmann's Primary Helps, 75 cts.
— The New Education, Vol. VI, \$2.00.
Meiklejohn's The New Education, 15 cts.
Kriege's The Child and Child Nature, \$1.00.

School Law

* Bardeen's Manual of Common School Law, \$1.00.
Johnson's School Law for Training Classes, 50 cts.
Uniform Questions in School Law, Answered, 25 cts.
Code of Public Instruction, New York, \$2.50.
Marble's Powers and Duties of School Officers, 15 cts.
State Education for the People, \$1.25.
Harris's General Government and Education, 15 cts.
Canfield's Rural Poor and Higher Education, 15 cts.
Northrop's High Schools, 25 cts.
Emerson's Latin in High Schools, 25 cts.
Bardeen's Effect of College-Preparatory High School upon Attendance and Scholarship in Lower Grades, 15 cts.
— Continuous Contracts for Teachers, 50 cts.
— Taxpayer and the Township System, 25 cts.
— Problems of City School Management, 25 cts.
Denominational Schools, Discussion of 1889, 25 cts.
Cooper's Compulsory Laws and Enforcement, 15 cts.
Miller's Education as a Department of Government, 15 cts.
The Bible in the Public Schools, \$1.00.
† Karoly's Dilemmas of Labor and Education, \$1.00.

The Teacher and His Qualifications

Ballard's Arrows, or Teaching a Fine Art, 75 cts.
Bardeen's Teacher as he Should Be, 25 cts.
— Teacher's Commercial Value, 25 cts.
— Teaching as a Business for Men, 25 cts.
— *† Teaching as a Business, Four Addresses, \$1.00.
— Continuous Contracts for Teachers, 50 cts.
— *† Roderick Hume, the Story of a N. Y. Teacher, \$1.25.
— *† Commissioner Hume, a Story of N. Y. Schools, \$1.25.
*† Riddle's Nicholas Comenius, ye Pa. Schoolmaster, \$1.50.
Sheely's Anecdotes and Humors of School Life, \$1.50.
Ellis's Tales Told out of School, \$1.00.
Hooper's Fifty Years in the Schoolroom, \$1.00.
*† Northend's The Teacher and the Parent, \$1.00.
Blodgett's Relation of a Principal to the Community &c. &c.
*† The Teacher's Mentor, \$1.00.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

- *† The Teacher's Critic, \$1.
- *† The Teacher's Guide to Correct Speech, \$1.00.
- * Helps to Self Culture, \$1.00.
- *† Huntington's Unconscious Tuition, 30 cts.
- Hinsdale's Pedagogical Chairs in Universities, 15 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- Gray's Methods and Courses in Normal Schools, 15 cts.
- † Thomas's Dictionary of University Degrees, \$1.00.
- Smith's Honorary Degrees in Colleges, 15 cts.
- † Kay's Education and Educators, \$2.00.
- Sabin's "Organization" vs. Originality, 15 cts.

The Science of Education

- *† (T) Herbert Spencer's Education, \$1.00.
- *† Herbart's Lectures and Letters on Education, \$1.75.
- *† Rein's Outlines of Pedagogics, \$1.25.
- † The standard text-book of the Herbartian system.
- † Hooper's "A Pot of Green Feathers", 50 cts.
- † A popular presentation of Herbartian principles.
- Spinoza's Amendment of the Intellect, \$1.00.
- *† Patrick's Elements of Pedagogics, \$1.00.
- Williams's Outlines of Psychology, 75 cts.
- (T) Payne's Science and Art of Education, \$1.00.
- *† Tate's Philosophy of Education, \$1.50.
- Uniform Questions in Philosophy of Education, Answered—25 cts.

- Hinsdale's Schools and Studies, \$1.50.
- Harris's Theory of Education, 15 cts.
- Milton's Small Tractate of Education, 15 cts.
- Harris's Pedagogical Investigation, 15 cts.
- Marenholz-Buelow's School Workshop, 15 cts.
- Gaines's Principles in Teaching, 20 cts.
- Maudsley's Sex in Mind and Education, 15 cts.
- *† Huntington's Unconscious Tuition, 30 cts.
- Education as Viewed by Thinkers, 15 cts.
- Beesau's Spirit of Education, \$1.25.
- Mill's Inaugural Address at St. Andrews, 25 cts.
- Craig's Philosophy of Training, \$2.00.
- Minutes of the International Congress, 1884, \$5.00.
- † Kay's Education and Educators, \$2.00.

Child Study

- McMillan's Early Childhood, \$1.25.
- † Grossmann's Manual of Child Study, 50 cts.
- † Perez's First Three Years of Childhood, \$1.50.
- Tiedemann's Record of Infant Life, 15 cts.

School Management

- *† (T) Landon's School Management, \$1.50.
- * Buckham's Handbook for Young Teachers, 75 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- *† Page's Theory and Practice of Teaching, \$1.00.
- *† DeGraff's School Room Guide, \$1.50.
- DeGraff's Primer of School Management, 25 cts.
- Batsdorf's Management of Country Schools, 20 cts.
- Gill's Method and School Management, \$1.00.
- Housel's Method of Graded Examinations, 50 cts.
- Wells's Graded Schools, \$1.00.
- Uniform Questions on School Management, Answered, 25 cts.
- Maxwell's Examinations as Tests for Promotion, 15 cts.
- Richardson's Learning and Health, 15 cts.
- Maudsley's Sex in Education, 15 cts.
- Sabin's "Organization vs. Individuality", 15 cts.
- Kotelmann's School Hygiene, \$1.50.

The Art of Teaching

- Fitch's Lectures on Teaching, \$1.25.
- † Fitch's Art of Questioning, 15 cts.
- † Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Hughes's How to Secure and Retain Attention, 50 cts.

- Hughes's Mistakes in Teaching, 60 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Southwick's Quiz Book on Theory and Practice, \$1.00.
- Dime Question Book on Theory and Practice, 10 cts.

School Discipline

- Wickersham's Discipline as a Factor, 50 cts.
- Kennedy's Philosophy of School Discipline, 15 cts.
- Aids to School Discipline, per box, \$1.25.
- Penniman's Suggestions in School Government, 15 cts.
- Briggs's Boys as they are Made, 25 cts.
- Lyttleton's Mothers and Sons, the Problem of Home Training, \$1.50.

- Sedgwick's Talks with my Pupils, \$1.00.

Courses of Study

- Emerson's Latin in High Schools, 25 cts.
- Kennedy's Must Greek Go? 50 cts.
- Lees's The Claims of Greek, 25 cts.
- Comfort's Modern Languages in Education, 50 cts.
- Pattee's Literature in the Public Schools, 20 cts.
- Bardeen's Effect of College-Preparatory School, 15 cts.
- McCosh's Essays on Higher Education, 75 cts.
- Northrop's High Schools, 25 cts.
- Canfield's Rural Poor and Higher Education, 15 cts.
- † Harris's Art Education, the true Industrial Education, 50 cts.
- Perrot's Art Teaching in High Schools, 50 cts.
- Gray's Courses of Study in Normal Schools, 15 cts.
- Hinsdale's Pedagogical Chairs in Colleges, 15 cts.
- Harris's University and School Extension, 15 cts.
- Meiklejohn's The New Education, 25 cts.
- Straight's Aspects of Industrial Education, 15 cts.
- Briggs's Industrial Training in Reformatory Institutions 25 cts.
- Marenholz-Buelow's School Work-Shop, 15 cts.
- The Bible in the Public Schools, \$1.00.
- Hinsdale's Schools and Studies, \$1.50.
- Beck's Graded Question Book, \$1.00.

Methods of Teaching

- Hoose's Province of Methods in Teaching, \$1.00.
- † Fitch's Lectures on Teaching, \$1.25.
- *† DeGraff's School Room Guide, \$1.50.
- *† Page's Theory and Practice of Teaching, \$1.00.
- Lilley's Second Year in School, \$1.00.
- Gowdy's Ideals and Programmes, 75 cts.
- Eclectic Manual of Methods, \$1.00.
- Van Wie's Methods in Common Branches, 75 cts.
- Development Helps, 50 cts.
- Dickinson's Limits of Oral Teaching, 15 cts.
- Barnard's Oral Training, 75 cts.
- † Hughes's Mistakes in Teaching, 50 cts.
- † How to Secure and Retain Attention, 50 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Art of Questioning, 15 cts.
- Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- Fitch's Lectures on Teaching, \$1.25.
- Kiddle's How to Teach, a Manual of Methods, \$1.00.
- Lind's Methods of Teaching in Country Schools, \$1.00.
- Hart's In the School Room, \$1.00.
- Bates's Methods of Teachers Institutes, 75 cts.
- Fowle's Teachers Institute, \$1.00.
- Uniform Exam. Questions on Methods, Answered, 25 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Bryant's Teaching of Morality in the Schools, \$1.00.

Natural Science

- Wilson's How to Study Nature in Elementary Schools, 50 cts.
- Gager's Current Errors in Science Teaching, 50 cts.
- † Harris's How to Teach Natural Science, 50 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

PRAISE FOR THE Review of Education

Your new Journal, of which I received a sample copy, I believe will be a fine paper, and I have instructed Miss Mae Wall, one of our teachers, to subscribe for it.

Odebolt, Iowa, Oct. 12, 1901.

THOS. B. HUTTON, Supt.

Please find enclosed subscription to the Review of Education. I have found it very promising of a good magazine.

Palo Alto, Cal., Aug. 20, 1901.

EDWIN D. STARBUCK.

I enjoy reading the Review of Education and think it is a very valuable magazine for teachers.

Avoca, Iowa, Oct. 15, 1901.

ANNA M. HOLWAY.

I feel that there is a place for the Review but I know it will be difficult to edit such a publication. The numbers up to date certainly are creditable and I hope your venture will prove a success for you.

Milwaukee, Wis., Oct. 12, 1901.

J. I. JEGI.

Enclosed please find \$1 for ten copies of the September number, 1901, of "The Review of Education."

Teachers College, N. Y., Oct. 9, 1901.

C. R. RICHARDS.

Beautiful Bird Calendar — FOR 1902 —

WE ARE ISSUING FOR IMMEDIATE DELIVERY the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming, twelve hundred, begin April first? Telegraph.—*To Principal W. B. Carhart, Coeymans, N. Y., March 24.*

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart, March 25.*

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—*To President Smiley, March 25.*

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley, March 25.*

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—*To Mr. Carhart.*

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart, March 26.*

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—*To Mr. Carhart, March 26.*

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart, March 26.*

Telegram.—Carhart telegraphs he will start Thursday.—*To President Smiley, March 26.*

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart, March 27.*

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—*To Mr. Carhart, March 27.*

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

Birds of Song and Story

By ELIZABETH and JOSEPH GRINNELL

16 Colored Plates. Price \$1.00.

These authors are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of out door study for many years but they have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends. The habits of every feathered friend of the dooryard and of the deep woods are known to Mr. and Mrs. Grinnell just as intimately as are the legends and the folklore of other ages touching the same bird. The title "Birds of Song and Story," is an eminently fitting one for the book, for in a few words it describes thoroughly its scope. There is a charm about the writings of both these authors that will appeal strongly to all lovers of good literature and especially strongly to all who love at once to read the printed page and the book of nature. Artistically, "Birds of Song and Story" will be made as nearly perfect as it is possible that any book may be.

A. W. MUMFORD, Publisher

203 Michigan Ave.

Chicago

NEW YORK

ADOPTION.

"I beg to advise you that a contract has been awarded to you by the Board of Education."

A. E. PALMER, Sec'y of Board,
New York.

The above reference is to the first three volumes of our BIRDS AND NATURE and also the 168 loose pictures illustrating them. These books and pictures are not only adopted for use in the school libraries of New York, but are extensively used in schools everywhere. The first three volumes adopted contain 168 exquisite pictures of birds in natural colors produced by color photography. The list price per volume in cloth is \$1.50, the special price, \$1.15. Loose pictures assorted as desired, 2 cents each, in sets of 168, \$1.75. Address

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago,

1135 Broadway, New York.

Greatest of all Tonics Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—

Invigorates the Entire System.

The Young Idea

Is a Study in Story
of the Living World.

Who will say that the story is not a factor in education? Fascinating facts told in choice language make a deep and lasting impression. We can grasp but one thought at a time; for this reason all our articles are short, and embrace one live subject; yet not too short to be choppy. Thousands of teachers and pupils read "The Young Idea" every month. It is a Magazine of Character, Study, Travel, Field Observations in Nature, and questions of the hour. Price, 50c a year; 30c in club lots. For \$1.50 we will send eleven copies five months. Correspond with

JAMES E. HUGHES

4 Ashburton Place, Boston, Mass.

WILLIAM MCKINLEY,

HIS LIFE AND WORK,

BY

Gen. Charles H. Grosvenor.

President's life long Friend, Comrade in war and Colleague in Congress. Was near his side with other great men when his eyes were closed in death. Followed the bier to the National Capitol and to Canton. The General requires a share of the proceeds of his book to be devoted to a McKinley Monument Fund. Thus every subscriber becomes a contributor to this fund. Millions of copies will be sold. Everybody will buy it. Orders for the asking. Nobody will refuse. Elegant Photogravure Portrait of President McKinley's last picture taken at the White House. You can easily and quickly clear \$1,000 taking orders. Order outfit quick. Chance to prove success, secure yearly contract and become Manager. Outfit free. Send 12c in stamps to pay expense of wrapping, packing and mailing elegant prospectus. Taking 10 to 50 orders daily. 50,000 copies will be sold in this vicinity. Address,

THE CONTINENTAL ASSEMBLY,
Corcoran Bldg., Opp. U. S. Treasury,
Washington, D. C.

One Dollar Secures 10,000 Shares of Stock

IN THE

OBISPO OIL COMPANY

OF CALIFORNIA.

THIS COMPANY OWNS OR CONTROLS OVER 12,000 ACRES OF OIL LAND IN KERN FRESNO, SAN BENITO AND SAN LUIS OBISPO COUNTIES.

FIRST WELL NOW BEING
DRILLED ON THE FAMOUS

SPOUTER SECTION.

2-11-24.

SUNSET DISTRICT, KERN CO., CAL.

We are entirely surrounded by flowing wells.

OUR GREAT OFFER.

Upon payment of \$1.00 we will give you an option on any sized block of stock from 25 to 10,000 shares at present price. No further payment to be made until we have a petroleum oil well of at least 100 barrels daily capacity. The dollar payment is simply to make the contract binding on both parties. This offer is for immediate acceptance, and we reserve the right to refuse contracts received at this office after well is completed.

We have many most flattering letters from prominent oil men in California. All praise the OBISPO and its properties. We will be pleased to mail you copies of these letters or show you the originals.

INVESTIGATE WHAT WE HAVE TO OFFER.

Don't let the fact that there have been fraudulent Companies that have squandered investors' money deter you from asking about the OBISPO. If we can't convince you that you are absolutely certain to make more money than you ever expected to have, we don't want your money.

BE ENTERPRISING! At least ask us for information. Address,

JOHN F. GILES, President,
Suite 74 D, - 119 La Salle St., Chicago, Ill.

N. B.—Mr. Giles was for twenty years engaged in educational work in Minnesota.

NON-ASSESSABLE STOCK.

TERMS AND PRICES, Par Value, \$1.00 per share.

CASH PRICES.

25 shares, \$4; 50 shares, \$8; 100 shares, \$15.50; 500 shares, \$75; 1,000 shares, \$140.

INSTALLMENT PRICES:

100 shares, \$20; \$4 down and \$2 per mo. till paid. 500 shares, \$100; \$20 down and \$10 per mo. till paid. 1,000 shares, \$200; \$40 down \$20 per mo. till paid.

If you want to know about the California Oil Fields ask for our Booklet. It's FREE.

The Review of Education.

VOL. VII.

CHICAGO, NOVEMBER, 1901.

No. 4.

EDITORIAL COMMENT.

The class room work in geography when the present adults were school children consisted of the bounding of states and counties, the locating of cities, stating the location of rivers and the direction in which they flow and the learning of other facts of like nature. To be sure the products of the different countries were considered to some extent, but only in the dry and prosaic pages of the text-book. Today geography means more. It is broader and deals more with man and his environment. Properly studied it is a splendid mental discipline. Mr. Wm. T. Harris says of it:

"Geography in the school, when taught, does more than any other branch to make the child at home in his environment; to organize his experience into apperception; to arouse in him a thirst for knowledge—that is to say, to give him a many-sided interest, and to give him a general habit of looking upon any one fact as an explanation of another."

Professor Philip Emerson says, in the *Popular Educator*:

"Time was when geography and history seemed to hold but slight relation to each other. Old-time histories inserted maps and located occurrences, perforce, but seldom presented geographic facts in the light of causes influencing the course of events, as do the best books of today. Former geographies did contain brief historical notes or paragraphs, but there was little attempt to make the past explanatory of the present, and some of the most popular texts in use today have made slight progress in this respect.

"The recent advance in physical geography has made clear the wonderful history of the forms of other lands, but in relating the stories of typical surface features the still more valuable and interesting development of social and industrial life has received little attention. This phase of history, which gives scant space to wars and politics, should be presented in connection with geography, because it explains the life of today and enables a student to rightly appreciate this life through contrast with the conditions of other days. Such study makes physiography more valuable also, since the historical treatment gives a view of the continuous action of physical forms and forces in connection with other factors, in developing man's life."

In Saginaw, Mich., the Board of Education was so well pleased with the results of the manual training work begun last year in the fifth and sixth grades that it has voted to extend the work to include the seventh and eighth grades. Mrs. Ida Hood Clark, who introduced the work in sewing last year, will supervise both the sewing and the knife-work of the fifth and sixth grades. Miss Helen Westgate, from Teachers' College, New York, will teach domestic science in the seventh and eighth grades, and Mr. J. R. Forden, from the University of Illinois, will teach woodworking in the same grades.—*Manual Training Magazine*.

At a recent meeting of the Chicago Principals' Association Judge Orrin N. Carter delivered an address on "A Layman's View of the Public Schools." In a clear and forceful manner he called attention to the defects, both of commission and omission, in the city's educational system. He vigorously protested against the introduction of pedagogical experiments and the overcrowding of the curriculum. The "cramming process" and the tendency toward "fads" were decried by Judge Carter, who said:

"Some educator has accomplished great results in teaching a child something by a new method. He thinks every one can obtain the same results. He suggests to the school authorities that his idea be tried, and his enthusiasm leads them into it. People of one idea are necessary to progress in the world, but they are unsafe advisers as to what ought to be taught in our public schools."

It was the opinion of those who listened to this address that the speaker's criticisms could not be disregarded by the School Board.

Judge Carter said in part:

"What will strike one who has never had anything to do with the schools in a large city most forcibly, on a casual investigation, is the great number of studies that are taken up during the course. I find that in the first year in the grammar grades at least 100 different topics are taught, that in the eighth year approximately 180 different topics are to be studied by the pupils during that year. The other grades will vary as to the number of topics taught. In the eighth grades in the grammar schools each scholar is compelled to use between fifty and sixty different text-books.

"Isn't that a pretty strong course of study for the average child? The result must necessarily be that the pupils will have only a smattering, a surface understanding of the subjects taught.

"There is still too much judging by marks in examinations, by immediate results; too much straining for novelties because they seem to give immediate results. Our common schools are not for the purpose of turning out specialists. Even though I am strongly in favor of manual training schools as separate

schools, I have felt that it was doubtful whether manual training in our grammar schools was a success.

"My present public position compels me to know that one of the great evils in our civilization in this country is the early physical and mental breakdown of our men and women through the strain of modern society. It is a crying abuse that this great fault of overwork should reach as far back as the schoolroom and thus early cause the blighting of all hopes of many of our most promising children. The course of study in the grammar school should not require the children to take home their books at night to keep up with their classes. Such a system is as barbarous for small children as the factory system, which Mrs. Browning painted so vividly and pathetically years ago.

"Only second in importance to this evil is the difficulty the teachers have in doing successful work, handicapped as they are by the number of studies that must be taught. I insist that there can be no question that our schools are attempting to teach too many things. What we want is more quality and less quantity.

"One of the great evils connected with the public school is experimenting with text-books. Experiments ought not to be permitted in such a great school system as ours. Those who do the selecting of books should not make such mistakes. They are costly, almost criminal.

"We all know and feel that partisan politics ought not to have a place in our public school system. During the last twelve or fifteen years I am confident that the question whether a man was a Republican or Democrat had little to do with his appointment to a position, or his promotion in the public school system.

"It is probably not politics, but it seems bad management to lay off a number of teachers some little time after they have been employed on the ground that a change in the system is required. This continual discussion of cutting the wages of teachers is a bad thing. The teachers must be made to feel more or less secure before they can give their best efforts to the work."

One of the unheralded educational publications of the year, the excellence of which ranks it with the most valuable contributions to pedagogical literature of recent years, is the report of Dr. Frank E. Spaulding, superintendent of the public schools of Passaic, N. J., for the two years 1898-1900. Though not designed for circulation beyond the limits of the city of Passaic, this report contains so much that is helpful and suggestive that it is to be regretted that a copy could not be put into the hands of every teacher who cares anything whatever about the study of the best educational thought and practice. It is no exaggeration to pronounce Dr. Spaulding's report the clearest, soundest, and most practical exposition of modern pedagogical principles, as applied to the public school system, to be found in print. Two years ago we brought to the attention of our readers some of the sound educational doctrine to which Dr. Spaulding gave expression in his first annual report as superintendent of the Passaic schools. His second report is a fuller statement of the principles of the newer education, and discusses the entire field of public school education with a breadth of view and depth of insight seldom found in pedagogical writing of this character. Instead of filling the pages of his report with stale and meaningless statistics he devotes a considerable part of his report to a statement of the aims which should shape the work of the school. This, it has always seemed to us, is one of the chief functions of reports of this kind, for they may be made a most effective means of disseminating sound notions of the real value of public school education, and of giving the public some understanding of the methods which will bring about the best development of the children in our schools.—*Journal of Pedagogy*.

Dartmouth College celebrated the one hundredth anniversary of the graduation of Daniel Webster, Wednesday, October 2, 1901. Of this event, *The Outlook* says:

In the history of American colleges it is doubtful whether there is any incident more widely known than that dramatic moment in what is known as the Dartmouth Case in which Webster ut-

tered the very simple but affecting words, "She is a little college, but there are those who love her." It was eminently fitting that the centennial anniversary of the graduation of Webster should be celebrated with due ceremony by his Alma Mater, and that she should invite as her guests and as the exponents of her thought some of the leading men of the country. Hanover was at its best in golden weather last Wednesday, when the trustees, faculty, alumni, students and visitors marched in procession to the church and were addressed by President Tucker, followed by a longer address by Congressman S. W. McCall, who reminded his readers that Webster never outgrew the simple loves of his youth; that he was on the most intimate relations not only with nature at Marshfield, but with all the animal life about him; that to the end of his days he was possessed by the passion of the angler; and that he delighted in the sea. The principal event of the day was the laying of the corner-stone of Webster Hall, which was put in position by a great-grandson of the statesman, ex-Governor Black, of this State, delivering the address. Dartmouth is very fortunate, not only in its traditions, among which the memory of Webster's student life and of his great services to the country hold a first place, but also in the new opportunities which have come to it under the leadership of Dr. Tucker, a man who combines in singular harmony the qualities of the ideal college president, and who has inspired the students, alumni, and friends of Dartmouth with a new belief in her usefulness, a new faith in her future, and a new passion for advancing her interests. Among those who received honorary degrees last week, as a proper part of the centennial ceremony, were the Rev. Dr. Edward Everett Hale, Senator Hoar, Chief Justice Fuller, Professor James Bryce, Secretary John Hay, and Booker T. Washington—a goodly list of names, illustrative of the breadth of interest which Dartmouth, typifying the American college, represents.

The October number of *The American School Board Journal* contains the following editorial, which truthfully por-

trays the peculiar difficulties encountered by the school superintendent:

The position of a school superintendent is not only more clearly defined from time to time by the school boards of the land, but the daily press is beginning to place a more accurate estimate upon the dignity, duty and difficulties of that position.

The educators, who from time to time dissertate upon the function of the school superintendent, are more apt to outline the ideal, the faultless, the perfect—than does the matter-of-fact school board member. The latter is more apt to see in the superintendent a human being with human qualities and failings.

The school board member who opposes the superintendent is more frequently prompted in his opposition because he finds that official too perfect rather than imperfect. The low standard of the school board member has always wreaked more harm than the higher standard of the superintendent. That the daily press occasionally grasps this fact may be learned from the following editorial, which appeared in an Ohio paper:

The circumscribing influences of a superintendent of public schools in a city large enough to require a body of more than a dozen men to direct and control, makes the conduct of the office nowadays the most exacting and exhausting proposition the modern office-holder has to fill. He must be an expert politician to gain the office and to hold it, and he must eschew politics if he wants room for educational qualifications necessary in the instruction of children. He must have his hands and mind in every move of the school board and he must keep some of them from knowing it. He is responsible for the course of study and accountable for results; and so must virtually dictate the text-books to be adopted without arousing the suspicion that he is in combination with the publisher for personal profit. He must correct the teachers without stirring up their hostility or inciting their malice to carry war into his camp through friends on the school board. He must have decided opinions and express them without disturbing the set notions of those under him, if he will avoid being put down as a bumptious egotist. In short, if he is

not selected for the office as the pet of a political ring to serve political purposes only, he is selected by the other class to better school conditions, and his coming is met on the one hand by stifling opposition and mean bickering and on the other by too much advertising and noisy acclaim, which makes it impossible for him to come up to expectations.

Commercial courses, which are now being organized in some of our high schools, are exposed to failure because they are made too easy. This is the danger which besets a new course, and it comes about in two ways. Certain new subjects are introduced which have little, if any, training value. Typewriting, for example, is such a subject. Practically the attainment has some value, but the learning of it is mere pottering, serving to while away an idle hour, but not ministering to mental growth. Shorthand has more educational value. Book-keeping, if spread out through a good part of a year, has something of the same weakness,—the intellectual training from it is slight. As taught in our schools its practical value has not been accounted great by business men. But, in the second place, such courses are apt to be easy because they "lack backbone." By this is meant that they have no subject requiring vigorous application extending through several years of the course. In the ancient classical course, Latin serves as such a subject; in others, the mathematics, followed by physics. These studies effectively train the student to strenuous and continued application, and so help to "make a man of him." A course lacking such an element is flabby and ineffective. After a few years it falls into contempt and disappears. This has been the fate of "business courses" heretofore, and will be again if they are made too easy. Parallel courses ought to be made as nearly equal in difficulty as possible; when not so made they either perish or pull the whole school down to their own level.—*Wisconsin Journal of Education*.

During the coming winter, extension lectures will be established by the University of Chicago, not only at centers

in Chicago, but also in Milwaukee, Minneapolis, St. Paul, Cincinnati, Pittsburg, Toledo and other large cities. It is said that eventually every town within 500 miles of Chicago which has a population of over 1,000 people will be included in the circle of centers. Among the subjects treated in these lectures will be English literature, music, the native races of North America, sculpture, sociology, astronomy and history. The extension division of the University also includes an extensive correspondence-study department. The work of this department appeals to the following classes: (1) Students preparing for college; (2) College students who are unable to pursue continuous resident study; (3) Grammar and high school teachers who have not had and cannot avail themselves of resident college instruction; (4) Teachers and others who have had a partial college course and wish to work along some special line; (5) Instructors in higher institutions who desire assistance in the advanced study of some special subject; (6) Professional and business men who wish technical advice; (7) Ministers and Bible students who would fit themselves better to use the sacred Scripture; (8) All who desire a broader knowledge or a more thorough scholarship.

Dr. Cyrus Northrop, President of University of Minnesota, in an address which he delivered at the recent bicentennial of Yale University made some trite statements which are worthy of careful thought by the teachers of our country. He said:

"But the real history of a country is not the record of its great men either in war or in peace. It is rather an account of the development and progress of the people, and especially so in this country, where the people's will can govern and ultimately does govern and where the wisest leaders before they speak listen for the voice of the people. The hope of the country is not in the astuteness and ability of its great men, but in the virtue, intelligence and good sense of the great body of the people. An institution of learning whose influence, educational and ethical, has permeated the great mass of

the people in all parts of the country, affecting alike their ideas, their mode of thinking, their habits of life, their conceptions of public and private virtue, of patriotism and of religion, has impressed itself upon the character of the nation in a more permanent way and with more wide-reaching results than an institution whose chief glory is the development of a few party leaders."

* * *

"The largest part of the alumni of the college are like the prairie—inconspicuous but useful. Some of the others are like the foothills—elevated but small in comparison with Shasta's heaven-piercing head. Comparatively few rise to mountain heights—and hardly one attains the grandeur of the solitary peak at whose majesty the world does homage. But the inconspicuous lives are not always the least useful lives. The men with the longest record in the triennial catalogue are not necessarily the men who have done the most good. Many a graduate as principal of an academy, a high school or a preparatory school of some kind has done a work that in its breadth, power and beneficence is not equaled by the work of more conspicuous men in higher fields.

"I would rather have the glory which rests upon the memory of Dr. Arnold of Rugby than the halo which encircles the proudest don of Oxford. It is a great thing to have a noble character. But it is a greater thing to plant your thoughts in intellects where they will grow, and to put your principles which have made character into hearts where they will be cherished. In this thought the teachers of all grades can rest content."

Rev. G. A. Gates, a former president of the State College of Iowa, has received a call to the presidency of Washburn College, at Topeka, Kan. Scientific work of considerable importance has emanated from this institution.

School attendance in the South has steadily increased during the last few years. The readers of the REVIEW will be interested in the following statement

contained in a recent number of the *Atlantic Educational Journal*:

"From every Southern state come reports of unprecedented attendance in the schools of all kinds. The colleges are all full, the city graded schools are running over, the country schools are taking on new life, the academies and preparatory schools report increased attendance. The people are beginning to awake to the importance of educating their children. They are taxing our meager school equipment to its utmost, and soon they will demand more and better equipment, and will be willing to pay for it.

"The greatest increase in attendance seems to be in the agricultural and mechanical colleges and other schools that offer some form of industrial or technical training. Our young men and women want to learn to do something. We are becoming aware of the abundance of our natural resources and of the unequalled opportunities offered to intelligent labor and well-directed industry. The two great movements of the first half of the twentieth century in the South are to be industrial and educational. These movements have already begun, and men now in active life will see them reach gigantic proportions."

When we see how universally Nature is dominated by rhythm, and when we learn from Froebel and other educators the importance of rhythm in the child's development, we may well resolve that plenty of rhythmic impression and expression shall be provided in the kindergarten. If rhythm is to exert its full influence later, sensitiveness to rhythm must be cultivated early; a goodly amount of bodily expression must be permitted to every rhythmic impression which the child feels. Several kindergartens observed during a visit in England showed striking examples of the encouragement given to children to yield themselves to all the rhythmic impulses that came to them. Here in America, the practice is growing of introducing specific exercises for rhythm,—clapping, skipping, etc.,—but spontaneous rhythmic expression is less commonly encouraged.

In one of the London kindergartens,

the children (standing at the time) were learning a new song. As they caught the rhythm of the poem, they began, one and another, and another, to sway in time to it; and this spread to the whole class, kindergarten and all. Nothing was said about rhythm, although it was so plainly enjoyed and so freely expressed. Noticing all this, the American observers could not help wondering whether the American kindergartner, with the laudable intention of securing poise and repose, did not check her children too much, and especially too early, in expressing the rhythm which they felt in poem, song, or instrumental music. Poise and repose will come all the more surely to children who in their early years have had sufficient cultivation and gratification of the desire to express rhythm. The people who annoy us at concerts by marking the rhythm of the music with nodding of the head, or with tapping of feet or fingers, have perhaps not outgrown the stage where rhythmic impulse demands a response in physical movement. In our very condemnation of such habits as "childish," "uncultivated," we relegate them to the stage where they properly belong. Training in quietness, in control, in inhibition, is necessary also, in its time; but its time is chiefly later.—*Kindergarten Review*.

The first edition of Hall Caine's "The Eternal City," was wonderful, consisting of two-hundred thousand copies. It is said that this is larger by one hundred thousand than the first edition of any other novel. The English edition contained one hundred thousand copies and the binding required twenty-two miles of cloth, and "the books if laid on top of one another would make a column three and one-half miles high."

Mr. Jacob A. Riis, in an article published in *The Sunday School Times*, says:

"Theodore Roosevelt loves children, as William McKinley did. When he was a police commissioner, we would sometimes go together to the Italian school of the Children's Aid Society, or some kindred place, and I loved of all things

to hear him talk to the little ones. They did, too. I fancy he left behind him on every one of those trips a streak of little patriots to whom, as they grow up, the memory of their hour with 'Teddy' will be a whole manual of good citizenship. I know one little girl out on Long Island who is to-day hugging the thought of the handshake he gave her as the most precious of her memories. And so do I, for I saw him spy her,—poor, pale little thing, in her threadbare jacket,—way back in the crowd of school children that swarmed about his train, and I saw him dash into the surging tide like a strong swimmer striking from the shore, make a way through the shouting mob of youngsters clear to where she was on the outskirts looking on hopelessly, catch and shake her hand as if his very heart were in his, and then catch the moving train on the run, while she looked after it, her face one big, happy smile. That was Roosevelt, every inch of him."

The University of Illinois has instituted a valuable course of lectures on "High School Organization and Administration." The services of the following gentlemen have been secured: Hon. Alfred Bayliss, State Superintendent; Prof. A. T. Nightingale and Supt. E. G. Cooley, of Chicago; O. T. Bright, Superintendent of the Cook County Schools; Supt. J. J. Wilkinson, of Mattoon; Supt. J. E. Collins, of Springfield; Supt. J. K. Stableton, of Bloomington; Principal J. E. Armstrong, of Chicago; Principal H. E. Boltwood, of Evanston, and Principal J. Stanley Brown, of Joliet. These teachers have had a wide experience with the school system of Illinois, and their lectures will prove very instructive.

Reviewers do not seem to agree as to the qualities of "The Eternal City." Dr. Robertson Nicoll says of it that "the treatment throughout, allowing for the subject, is marked by singular delicacy and reserve." Mr. Clement Shorter, on the other hand, says:

"The vulgarity of style seems to me to obtain with two-thirds of our popular novelists, and in 'The Eternal City' we

find such choice flowers of language as the following:

"'David Rossi swallowed his saliva.'

"'She took up the child's garments and smelt them one by one.'

"Of course, there is no argument about phrases of this order, although they abound throughout the book. People either like this kind of thing and pronounce Mr. Caine a prophet, or they do not like it and bluntly pronounce it vulgar. Of course, it is not possible to condemn 'The Eternal City' wholly on this account. As I have said, to be popular you must be vulgar, and Mr. Caine is determined to be popular—and succeeds."
—*The Critic*.

In view of the fact that President G. Stanley Hall, of Clark University, is one of the most popular lecturers among women's clubs and greatly in demand by the educational committees especially, it is particularly interesting to note that while he encourages higher education, he also advises that women be educated for the home, and his judgment is:

"Women's colleges have done little or nothing for the proper education of women. While I sympathize with the claims of women and yield to no one in admiration of their work in the colleges, it looks as if the colleges were training for independence, self-support and celibacy, motherhood to take care of itself."

Professor Hall further states, says the Boston Sunday *Herald*, that he would have the women's colleges made up of cottage homes, with pets and gardening and outdoor exercise. In the curriculum should be religion, rudimentary mathematics and physics, a little history and a good deal of botany.—*The World Review*.

"Fads" was the theme under discussion at a recent meeting of the Hull House Woman's Club, of Chicago. The particular subjects considered, under this head, were drawing, music, manual training, cooking and the modern languages. The value of these so-called "fads" in the curriculum of the grade schools was thoroughly debated by the ladies. The consensus of opinion indi-

cated by a ballot, was strongly in favor of their continuance as a part of the school work. The majority seemed to be in harmony with the expressed opinion of one member, who said: "The general broadening of interest and study in the public schools is very valuable. Its value lies in the fact that it makes the schoolroom a place of enjoyment for the children and increases their interest in their work, which is a great step in the educational path."

Miss Elizabeth Harrison delivered the opening lecture of this school year at the Chicago Kindergarten College. Her subject was, "Misunderstood Children." The lecture was replete with interesting statements and good advice. She said:

"Mothers are just awakening to the fact that the emotions of children may be developed into will and thought and strength.

"Stupid children have been found to have defective hearing and eyesight. We know now that many misunderstood children, said to be dull of comprehension, accused of wilfulness, disobedience and obstinacy, were children whose physical organs were not in the right condition.

"The teacher usually knows more of the physical condition of the child than the mother, and should be looked to for advice."

Dr. Ira Remsen, professor of chemistry at the Johns Hopkins University, has been elected president of the university to succeed Dr. Daniel C. Gilman, whose resignation takes effect in October.

The authorities of the University of Oxford have passed and forwarded it to President Roosevelt an address eulogiz-

ing the late President William McKinley and expressing sympathy with the American people. This address concludes with the following paragraph:

"We, the chancellor, masters and scholars of the University of Oxford, feel that you, sir, have succeeded to a grave and almost overwhelming responsibility, but we also realize your high, independent character, earnestness of purpose and determination to continue unbrokenly the policy of your predecessor, an assurance which cannot but give confidence to all who watch with deep interest the advance of the American nation."

The registration of students at all of our more prominent universities and colleges shows a decided increase over that of a year ago. On account of its age and influence that of Yale University is of interest. The lowest estimate places the number of students in all the departments at not less than 2,800 or a gain of over 200. The faculty has also been increased from 265 to 295 members.

It is the aim of Mrs. Stanford and the faculty of the Leland Stanford, Jr., University, to increase the courses and equipment of that institution to such an extent that it will be possible for its graduates to carry out research work, in all the branches of investigation, thus rendering it unnecessary for them to visit eastern and European institutions for this purpose.

At a recent meeting of the Board of Trustees of Princeton University, ex-President Grover Cleveland was elected a life member of the board to fill a vacancy caused by the death of the Rev. George T. Parves.

THE LOVE AND STUDY OF NATURE—A PART OF EDUCATION.*

BY DR. G. STANLEY HALL,
President Clark University, Worcester.

My subject, "The Love and Study of Nature," is both very old and very worn. Nature has always been studied and such work has always been approved. Trite and hackneyed as the theme is, however, you will all admit that study is one of the most ennobling occupations of man, that love is the highest sentiment, and that nature in its broadest sense is the largest theme in the world; so that at the outset it must be evident that in the limited time at my disposal I can only touch my vast theme at a few points, and these in only the most general terms.

To begin with, I wish to urge that science, art, literature, religion and human history and society are the five great objects, not only of education, but of human interests. Nearly all of the courses of study in the world have been framed of the material in these departments, and every one of them roots in the love and study of nature.

This may not seem obvious without a little reflection. Let us therefore glance at the history of each of these departments—first, of science.

I. Astronomy, for instance, which originated with Eudoxus and Hipparchus and was developed by Copernicus, Galileo and Kepler is a creation of one of the sublimest of all human interests, that in the heavens above us. From Tycho Brahe, isolating himself on his lonely island for years to devote himself more exclusively to the stars, down to Professor Pickering, in his all-night work in photographing the entire sky on a vast co-operative plan; Professor Holden, at the summit of Mount Hamilton; Mr. Lowell, on Chimborazo, trying to settle the vexed problems of canals in Mars; the late Dr. Gould, in his long years of voluntary exile from home in South America; Professor Todd, on his eclipse expeditions,—all are animated by this great love, and the whole science of astronomy was created by its saints, martyrs and hermits, smitten by the

great passion to push knowledge to its remotest bounds, that mankind might know something concerning infinite space and its stellar population.

Physics and chemistry, to those who know their history from Roger and Sir Francis Bacon through the period of alchemy and the black arts; botany, which has tempted men into inhospitable lands, sometimes dangerous, and generally involving more or less hardship; biology, consecrated by the service of all sorts and conditions of devotees, from Linnæus, Lamarck, Cuvier, St. Hilaire and Audubon, down to Darwin, Hagen, and all the Challenger and other expeditions; geography, from Marco Polo to Stanley and Nansen; geology, from Pliny down; anatomy, from Haller and the great anatomists of the seventeenth century,—all these are the creations of men who have abjured an easy life, and have more or less sacrificed the dilettante's love of general knowledge and become specialists with an enthusiasm not all unlike that of Simon Stylites or the Trappists, and who really deserve all the honor which Comte sought to bestow upon them by renaming every day throughout the year from such creators of science, as the Catholic calendar had made each day sacred to the name of some saint selected from the many thousands whose lives constitute that great arsenal of virtue, to the further elaboration of which one Catholic sect, the Bollandists, devotes all its work.

II. Just so nature has in all ages been the muse that has inspired every artist in every line of art. Landscapes from Claude Lorrain and Turner down can be painted in a way to bring out the whole meaning only by those who see with the heart. Architecture, which originated in the forest, from trees and the acanthus; sculpture, which still takes its canons from Greek art, which was closest to nature; poetry, which originated in description and narrative music; music,

* From a lecture delivered before the State Board of Agriculture of Massachusetts.

which developed from the songs of birds, the noises of the waves and winds and other sounds of nature,—all suggest, both by their origin and by their general directive principles, that the best art is that which comes closest to nature, and the best artist is he who remains most natural. No one waxes more eloquent than Ruskin in placing at the head of all creative geniuses those who feel the stars, sky, storms, mountains, flowers, animals, seasons, sunrises and all the varying phenomena of night, day, climate, etc. Professor Vachon, who has just finished the most comprehensive report, in several quarto volumes, of the condition of art in the various countries in Europe, and the unknown author of one of the most popular books of recent years, "Rembrandt als Erzieher," agree in two conclusions: first, that the best artists are those who conserve most completely into maturity and old age the sentiments and ideas of youth at its prime; and, secondly, that most of those who approach the top of the ladder of fame in all lines of art are those who have been inspired by the environment in which the most susceptible years of youth were passed, and who have succeeded in expressing most completely its natural responses to the experiences thus suggested.

III. The same law holds in literature, provided we consider only those lands in which it has had an indigenous origin. The contents and substance of the old Aryan literature, as Max Muller has spent his life in showing, are largely faded metaphors, describing dawn, clouds, storm, lightning, personified, and their common phenomena made into allegories of human life. Hercules and William Tell were, as the world knows, simply solar heroes, as the etymology of their names and their achievements show Diana is the moon, Ahayhu the storm, Vulcan is fire, Jove the sky, etc. The same is true in early Teutonic literature. Brunhilde, Thor, Hagen, are also nature deities. Early French literature shows us primitive animal tales, like Reynard the fox, said to have had no less than a thousand forms and editions, and to have been wrought over in symbolic form and made into material of warefare in long controversies between Catholics and

Protestants. Aesop shows another older cycle of similar origin and purport. Animals are said to reflect human life. Take any collection of totems, stories or comparative study of cosmology, and we find the same rule. Among the earliest products of the Greek mind are the Orphic hymns, some of the best of which we find addressed to night, heaven, ether, echo, earth, sun, stars, clouds, nature, Pan, etc. Read histories of national literature, or of special departments of them, like Veitsch, Biese, Reynolds, Fischer on the influence of the sea on poetry, and the further back we go, the more evident and all-dominating is the influence of nature.

IV. Religion. Max Muller estimates that, of three thousand Aryan deities, nearly, if not every one, were originally nature gods; and I venture the assertion that hardly any common or prominent object or department of nature has not somewhere by some people or person been made an object of supreme worship. The Persians and Babylonians were star worshipers, and their only priests were astrologists. The sun and moon were highest deities for Socrates, and countless temples have been dedicated to their worship. Even Johanna Ambrosius, that amazing German peasant-poet genius, prays in one of her poems that when she dies she may spend eternity in the moon. Parsees worshiped fire, which Heraclites made the supreme principle, of which religion the Zend Avesta is the Bible. The East Indians held clouds, storms, weather and lightning to be divine. Many savages worship water, which Thales thought the best of all revelations of deity. Not only savages, but half-civilized people, have been fetish worshipers, and bow down in religious awe before stone and other inanimate objects used as charms and amulets, as Mr. Condar has shown in his fascinating book entitled "Heth and Moab." Flower and plant oracles in popular superstition are remnants of a wide religious cult, which associated plants and planets for both medical and sacred uses by the doctrine of signatures. The Druids, as the name indicates, were tree worshipers, and for them as for no others the groves were God's first temples. Nearly all the primi-

tive population of America were totem worshipers, and held that beasts and birds and beasts were incarnations of great heroes of the past, whose souls had entered their bodies by transmigration. Serpent worship, as Mr. Ferguson has well proven, at one time spread nearly all over the world. Confucius and the Chinese and many polytheists worship human ancestors or great men, perhaps apotheosized into demigods. Pantheism, the more or less conscious religion of many of the most cultivated minds today, is the deification of nature; and we are often told that the unity of mind and faith we call monotheism, the achievement of which was one of the greatest labors of the human soul, could never have been wrought out but for the influence of the all-encompassing blue void of heaven, perhaps pierced by some Sinai or other sacred mountain. Hymn books of many faiths have been studied that show us how dominant natural objects and phenomena have been in shaping the religious consciousness of the world, and how inconceivably different all would have been but for the symbolism involved in the score or two of those most favorite.

V. Man is the bright consummate flower of nature. In our growth from childhood or from the earliest prenatal beginning, each of us repeats in his own individual life the entire history of life since it began upon this globe. You and I have practically been plants or proto-phytes, protozoan, metazoan and all the rest, recapitulating each stage. The human brain, through which all revelations have come, is the only mouthpiece of the Divine in the world; so that man, who, on the whole, stands at the summit of nature, has not only been the chief subject of interest to himself, according to the well-known dictum of Pope, that the highest study of mankind is man, but philosophers have assured us that we cannot possibly think too highly of ourselves. Human personality is naturally, therefore, our organ of apperceiving deity; and even yet it is regarded in some localities as a little heterodox to even raise the question whether or not God may be something higher than personality, even though we agree that

he can be nothing lower. This is the standpoint from which all the basis of anthropological studies are made; and, if the burden of the Bibles rolled out of the great heart of nature, as Emerson has told us, far more has man emerged from the same source, and is himself the highest of all revelations.

From these rough and brief characterizations we may see that, in the larger sense of that mighty word, in nature about all human interests are involved, and that the love and study of it might almost be made the supreme duty and end of human existence.

Let us now pass to a very different part of our theme, and show how, in its early stages, the development of childhood passes through all these stages of love and interest. We have collected many hundreds of cases where children gather stones, knots, bits of metal, pottery, wood, bone, shells, leather, rags and scores of other inanimate things, endow them with a rudimentary kind of sensation, keep smooth, bright or pretty colored stones in cotton, try to keep them warm, carry them in their pocket or otherwise about their person, and even talk or invent experiences or myths about them, and are essentially fetish worshipers in all that that term implies. We may have done thus more or less in our early years; but memory rarely preserves traces of these experiences, which, indeed, have to be scored away to make room for higher and larger mental content. This is going on often with our own children or those about us, unnoticed by even the fondest parents; and is, indeed, concealed by most children in civilized lands, who are early haunted by the dim presentiment of a future standpoint. Again, we have a large collection of spontaneous conversations with or invocations of prayers to the sun, particularly to the moon, by American children, who illustrate the once widespread astrological consciousness. Many see the faces of just dead friends, parents, God, the Virgin Mary, Christ, etc., in the moon. They often make it an external conscience, believing that it recedes farther into the sky or grows either small or dim when they are bad, it is repelled, ashamed, hid-

ing behind clouds for shame, or tearful of their own wrong-doings, or comes nearer, getting larger, brighter if they are good, and in rare cases even speaking commendations of their acts. So, too, flowers have a language all their own. The rose speaks of love, the violet of modesty, the lily of kingly beauty, the poppy of sleep, the ladies' slipper, honeysuckle, dewdrop, harebell, tulip, marigold, dandelion, hollyhock, jessamine, hyacinth, clover, buttercup, daisy,—all suggest at least, if we turn to their etymologies, how warm and close about the human heart flowers have always lain. They have moral qualities, and illustrate psychological characteristics, brighten the earth and therefore the heart of man. Their fragrance suggests incense, the miracle of their relations to birds and insects, and their perfumes are the creators of special sentiments, and the best of all language of some and reflections of others. The seer who plucked the flower from the crannied wall realized that, could he but know what it was, root and all, leaf and all, he would know what God and man were. While the human clodhopper is he for whom, as for Peter Bell, the cowslip by the river's brim, a yellow cowslip is to him, and it is nothing more. The great kindergarten-apostle lay one day, he knew not how long, gazing into the calyx of a yellow flower with black spots, and arose from his hypnotism by it a new man. Flower lore reflects all this childish stage, and teaches us how to begin instruction in this field, rather than, as is often done, to dull the apprehension and spontaneous childish interest by the technical methods and names of adult botany. For the child the trees literally talk, as their leaves murmur in the wind. They hear and repeat the words by which they call the birds to alight on them, eat their fruit, build their nests in them, sing, scold, invite them to climb to their branches, etc. It is painfully cruel to trim trees or shrubs, and often punishment to flowers to pluck them, and murder to pull them up. All this animism is a placenta by which nascent interest in nature is nourished and stimulated to grow toward maturity. While great care to furnish abundant pabulum in this di-

rection should be taken, interference is mutilation of the budding soul.

So, too, with animals. The child's soul sees no chasm between pets and other human beings. The dog, cat, horse, and often all the rest of the animals within its ken, perceive, feel and think as the child does; are responsive to all its intentions and endeavors, and speak a language essentially different, but sometimes with plenty of human words in it; have souls that go to the animal if not to the human heaven; are perhaps even more companionable than parents or playmates; love, hate, fear, feel revenge, are good or naughty, quick or stupid to learn or understand, tired like the doll when the child is tired, eat, sleep and walk like and sometimes with their little human owners or companions, love to be dressed, to be carried, to ride, to have their toilets carefully made, to be decorated with ornaments, etc. Indeed, we might almost define the animal world as consisting of human qualities broken up and widely scattered throughout nature, and having their highest utility in teaching the child psychology by a true pedagogical method. The pig, to a child who knows its habits and what piggishness means, is a symbol of impetuous greed and gross selfishness not only in eating, but also in other matters of filth and untidiness, which gives the child with this familiarity a better conception and a truer reaction to all that these qualities mean in the world of man. To say, of a woman, She is a butterfly or a peacock, describes traits which it would take a whole chapter to explain to one who was not familiar with these forms of animal life. In the same way, the goose, the fox, the eel, the lion, bulls and bears, the eagle, the dove, the jay, the cuckoo, the hawk, the pelican, the crow, the serpent, the gazelle, the cormorant, the badger, wolf, tiger, elephant, alligator, fish, chrysalis and its metamorphoses, the bee, ant, wasp, the sloth, insect, the ape, hibernation, migration, nest-building and scores of others are psychological categories or qualities embodied and exaggerated so that we see them writ large and taught object-lesson-wise, to those who live at a stage when character is being moulded and in-

fluenced pro or con in each of these directions.

We might add a long list of more or less mythic animals or popular misconceptions of animal traits. The leviathan, the phoenix, the albatross, the tadpole, the frog, the centaur, the children's fancy in creating impossible new animals, is almost as fecund as nature herself. Therefore we plead for menageries, for collections of animals in every public park, pets, a familiarity with stable, school museums of stuffed specimens, the flora and fauna of the neighborhood in every school-house, to say nothing of instruction in every school concerning insects, birds, and animals which are noxious, and those which are helpful to vegetation, fruit and agriculture generally. The story of the gypsy moth; the phylloxera; the caterpillar; the tobacco worm; the life-history and habits of other parasites in the bark or on the leaf, in seed or pulp, the marvelous habits of the botfly; the angle worm, through whose body all our vegetable mould has so often passed; the common house fly with its interesting and less ephemeral story than we would have thought; the grub; the wire worm; moth and bat; the food fishes; weeds; sorghum; ginseng; grasses; potato beetle; hemp; peach-tree borer; the apple aphid; the tent makers; and many other fascinating living creatures which have been so carefully studied of late in our agricultural colleges,—have a moral as well as a scientific interest to childhood, and make a kind of knowledge which has an educational to say nothing of an economic value, and which must be ranked as one of the very highest.

Again, geology is one of the greatest triumphs of the human mind. It gives in outline, although with many gaps, the development-history of the world in which we live; and its educational value, not only from the importance of its body of facts, but as logical discipline, is perhaps second to no science. But mineralogy, with its technical nomenclature and detailed study of the forms of crystals, and especially petrography, while perhaps the best method of logical approach, is the worst pedagogically. Rather the selected topics from the life of primitive and perhaps cave-dwelling man; the ex-

tinct animals and plants; the landscape in the period of coral formation; emergence and subsidence; reversing the order of time and always beginning with subjects of human interest and irradiating to the vegetable and then the inanimate world, and back towards primeval nebulae, with paleontology always preceding lithology, —would be the order of psychic evolution.

Geography is the great obstacle of to-day in the way of placing the study of nature on a sound pedagogic basis. It is an amorphous relic of pre-scientific days in education, the text-book maker's pet and the true pedagog's abomination. If we could reduce it to a fourth or a tenth of its present time and dimensions, and substitute the rudiments of the leading sciences of which it is a kind of wash, resembling life only as an unlinked sausage resembles an organic and living snake, the efficiency of our entire school system would be greatly enhanced. Such a change can of course come only slowly; strongholds of prejudice rarely capitulate at once, but are gradually worn away by the fresh currents of thought and knowledge that are now acquiring more and more momentum. Compare the scope of a full-blown modern geography, with all its canvas of maps, its photographs of cereals, mines, cars, tables of population, animals, geological scenes, barbaric costumes, fishing and hunting, fine public buildings, ships, huts, savage wagons, sculptured heads, savage customs, happy families of beasts, birds and insects, extracts from census maps, and with chips from, as I estimate it, about seven to ten different sciences, with the modest field of work laid down by the professors of geography in the few foreign universities that enjoy that admirable luxury or the field which the Royal Geographical Society proposes to itself, and we shall realize what a fungoid, non-descript and amorphous parasite threatens the health and well-being of our school system.

As Turkey is sometimes called the sick man of Europe, so geography is the sick subject of our curriculum, and needs doctoring. Turkey is a bit of Asia and Africa which erupted into another continent. It represents a faith once so

strong as to threaten to overrun the West, but is now the reduced relic of mediævalism. Just so geography in its old form, cosmology, included almost the entire field now occupied by the sciences that deal with nature. Its frequent definition—a description of the earth—including, of course, the air above and the mines beneath, and not limited to a mathematical surface, includes almost everything that can ever be of interest to man. The special sciences have split off from it somewhat, as the different humanistic branches have gradually split off from philosophy or geology yet earlier. Again, our text-books in geography in recent decades, as an inspection shows, are mostly written by men who would not be recognized as members of any geographical society, and many of whom lack a collegiate education. The same is true of a number of those who are most prominent representatives or advocates of its methods. So the doctors of our sick men are not recognized by the general school. In his comprehensive memoir upon the subject, Mr. Scott Keltie, among two hundred and twenty-nine text-books in geography, mentions only three American ones. Geography, while it has had able representatives in special departments of it in this country, is the favorite tumbling ground for the half-educated or uneducated, and has never felt those stimulating influences that are always working from the university departments, downward; but has been left almost entirely to be shaped by the schoolmaster and the publisher. It has nearly all the defects of popularized science, without the saving merits of the latter—of having been made by experts.

I would by no means advocate the entire abolition of geography from the school courses, but I would not only greatly reduce the text-books and time, but put the work much later, and teach most of the matter now included in it in the high school, in proper scientific connection—part of it with history, part with astronomy, part with geology, part with natural history, etc.—the elements of all of these to be thus made room for at the expense of their common enemy.

In some sections of our country it would almost seem that nature work is

declining relatively to its former prominence, and is certainly far less central than it should be. City life is unfavorable to fresh contact with nature at very many points, and adequate illustrative material is hard to get; so that teachers sometimes give up in despair, because these branches cannot be represented according to modern object methods. Moreover, city children are, as abundant records show, amazingly ignorant of the commonest phenomena of nature. On the other hand, there has been recent progress which we must all hail with great joy. Religion and science are each giving abundant signs that the long warfare between them is drawing to a close. This means an immense economy of energy, hitherto wasted in conflict between two great human interests, neither of which can satisfactorily flourish without the other. Many do not realize how far we have advanced since the days of Huxley's greatest bitterness, Tyndall's prayer gage, and the gross materialism of Buechner and Moleschott. Faith and science cannot be opposed. The great Heart of the universe does not do one thing in his works and say another in his word. The attitude of young scientific students toward religion is growing more and more favorable. Clergymen are more interested in science, and the plea that it must be an element in all theological training and also in the Sunday-school is now being heard. We also hear fewer denunciations of "science falsely so called" in the pulpit, and the same student now often believes in and is interested in Genesis and in geology.

We read of the venerable Bæda gazing through his rude astronomic tube, and pausing to write a *Magnificat* or a *Gloria in Excelsis*; of St. Francis D'Assisi addressing stars, flowers and worms as his brothers and sisters; we see the order and perfect structure of the lowest and most repulsive things, and realize that nature is a veil; as the term indicates, that it is pregnant with the about-to-be; and when we realize how all things seem to cry out for a higher explanation, and strain our eyes to see through the azure, our heart sings the ancient and only song of Horus, "Hush, all hush." There is no matter that is dead or inert. What

seems so is an accident, perhaps merely of temperature, or we know not what. This world is dynamic, and made of pure force, and that is spiritual. Of her most repulsive aspects we might use the language which that quaint and recent English genius poet applied to his mistress, who was homely, but with every charm of character and spirit, when he cries, "I cannot see thy countenance, love, for thy soul."

There surely is a renaissance, a revival of the love of nature abroad in the world to-day. The book stores show it in numberless new books, with large sales, on ferns, mushrooms, birds and stars, which the people buy and read. Magazines, lecture courses, the vast body of new popular science extension work show the same thing; although there are many mucker or Philistine souls whose hearts are still hardened against the knocking of the still, small, pleading voice of this holy spirit.

And now I ask, do you each really love nature in this day when her holy spirit is so abundantly poured out on us, or are you still aliens and exiles from her great repose? If so, come, taste and see that she is of all things the purest, noblest, greatest and truest. She can console, inspire and reveal. She is the great all-mother from whose bosom we sprung, and to which at least all that is mortal of us will return. In affliction,

in calamity, when conscious purpose and endeavor fail, we can sink back into her everlasting arms; and when creeds and philosophies weaken or fade, we know that if our bark sink it is to a larger sea. Science now tells us that there is no void, but that infinite space is full of ethereal energy. We know that wherever on this earth life is possible, it exists; and that some great power behind and under all causes every species to multiply, sometimes with amazing rapidity, so that, were this fecund energy unchecked by selective and other influences, a single species would literally fill the world. Science has taught us, too, that there is no chaos, but everywhere there is law; and the slow evolution of sex and parenthood shows us that at the bottom and top of all is love. The highest and latest product of all is man, and the supreme function of all that we call the environment throughout this complex magazine of forces and influences is the intuition of the soul, as if everything existed to bring these to their fullest maturity. Thus childhood and youth at their best and in their full glory are the consummate flowers of nature, and more worthy than anything else on earth of love, reverence and devoted service. Unity with nature is the glory of childhood, and unity with nature and with childhood is the glory of fatherhood and motherhood.

THE RELIGION OF A COLLEGE STUDENT.

BY PROF. FRANCIS G. PEABODY.

A great many people imagine that the years from seventeen to twenty-two are not likely to be years of natural piety. The world, it is urged, is just making its appeal to the flesh and to the mind with overmastering power, while the experience of life has not yet created for itself a stable religion. Fifteen years ago it was determined in Harvard University that religion should be no longer regarded as a part of academic discipline, but should be offered to youth as a privilege and opportunity. It was then argued by at least one learned person that the system was sure to fail, because by the very conditions of their growth young men were unsusceptible to religion. They had outgrown, he urged, the religion of their childhood, and had not yet grown into the religion of their maturity; so that a plan which rested on faith in the inherent religiousness of young men was doomed to disappointment. If, however, the voluntary system of religion applied to university life has proved anything in these fifteen years, it has proved the essentially religious nature of the normal, educated young man of America. To offer religion not as an obligation of college life, but as its supreme privilege, was an act of faith in young men. It assumed that when religion was honestly and intelligently presented to the mind of youth it would receive a reverent and responsive recognition.

The issue of this undertaking has serious lessons for the Christian church. It disposes altogether of the meager expect-

ation with which the life of youth is frequently regarded. I have heard a preacher, addressing a college audience, announce that just as childhood was so assailed by infantile diseases and mishaps that it was surprising to see any child grow up, so youth was assailed by so many sins that it was surprising to see any young man grow up unstained. There is no rational basis for this enervating skepticism. The fact is that it is natural for a young man to be good, just as it is natural for a child to grow up. A much wiser word was spoken by one of my colleagues, who, having been asked to address an audience on the temptations of the college life, said that he should devote himself chiefly to its temptations to excellence. A college boy, that is to say, is not, as many suppose, a peculiarly misguided and essentially light-minded person. He is, on the contrary, set in conditions which tempt to excellence and is peculiarly responsive to every sincere appeal to his higher life. Behind the mask of light-mindedness or self-assertion which he assumes, his interior life is wrestling with fundamental problems, as Jacob wrestled with the angel and would not let it go until it blessed him. "Your young men," said the prophet, with deep insight into the nature of youth, "shall see visions." They are our natural idealists. The shades of the prison-house of common life have not yet closed about their sense of the romantic, the heroic, the noble.—*The Forum*.

SCHOOLS OF COMMERCE.

The recent announcement that the College of Commerce and Administration of the University of Chicago has made arrangements for lectures on business topics by twenty-five men of great prominence in the business world calls attention again to the efforts which the col-

leges of the country are making to provide young men with a technical business education. These collegiate schools of commerce differ from the ordinary "business college" by reason of the broad scope of their instruction, while, on the other hand, they make a nearer approach

to training in actual business methods than is possible in the regular courses offered in economics.

That the University of Chicago is interesting itself in this question is a matter upon which every resident of this city may congratulate himself. But it must not be supposed that the University of Chicago is in this case blazing the way through an unexplored region. On the contrary, it is following a trail which is by this time well marked out, although it has not yet developed into the avenue which it is possibly destined to become. It was in 1820 that a school of commerce was projected in Paris, and today the great commercial colleges of Paris, Vienna, and Berlin offer a remarkable variety of courses, together with a most uncompromising thoroughness of work. It is undoubtedly the work done in the technical, industrial, and commercial schools that has, during the last sixty years, raised Germany, with all its poverty of resources, into one of the strongest nations of the modern business world. For that marvelous accomplishment the credit is due purely to the scientific intellect, carefully disciplined and proceeding to its task with a wide comprehension of world conditions. England, on the contrary, shows the result of the neglect of such studies, and is now obliged to surrender stronghold after stronghold as it retires before an attack which is supported by the scientific skill of Germany and the natural resources of the United States.

But it is not only in Europe that schools of commerce have been organized. In this country the same tendency, though somewhat delayed, has become evident. At Dartmouth the Amos Tuck School of Administration and Finance; at Pennsylvania the four years' courses in finance and economy (the Wharton School), in commerce and industry, and in business practice and banking; at Har-

vard the addition of courses that make the department of economics equivalent to a college of commerce; at the University of Michigan the courses in commerce and public administration; at the University of Iowa the Iowa School of Political and Social Science; at Wisconsin the regularly established school of commerce—all provide the kind of instruction that will be given in the School of Commerce of the University of Chicago. In all these institutions courses are offered in such subjects as business organization, commercial and corporation law, investments, transportation, conditions of international trade, history and theory of money, commercial crises, materials of commerce, international payments and flow of the precious metals, the labor question, and principles of accounting. A young man who has devoted himself for two or three years to such studies will enter upon his life duties with an understanding of the general nature of trade which will enable him to conduct his business on a broadly intelligent basis. As long as young lawyers study the theory of law there seems to be no reason why young business men should not study the theory of business. The possibilities of commerce will appear much more plainly to a man who has had a training in the fundamental principles of commerce than to one who is without it. And as the United States of the future will be forced to rely less and less every year, on the exuberance of its natural resources, it will turn to the disciplined intelligence which will repair that deficiency and which, by the application of scientific principles, will sustain an enormous population in a country which no longer pours forth its natural wealth in such streams as almost to overwhelm its exploiters. It is this development that such institutions as the University of Chicago College of Commerce will foster and direct.—*The Chicago Tribune.*

HOUSEHOLD OCCUPATIONS IN PRIMARY GRADES.

KATHERINE B. CAMP,

Director of Science, University Laboratory School, University of Chicago.

Some general principles of selection of subject-matter (including "methods" in this term) for primary grades must of course be agreed upon before any discussion of the adaptability of any particular form of occupational school work for small children can proceed. In a number of cases a tendency has been shown to use subject-matter that is more or less social and continuous with the youngest children in the kindergartens and so-called connecting classes. It seems strange that Froebel's great idea of the educative function of occupational plays used in the kindergarten did not effect, following its natural development, a rational change in the work of the primary grades. But traditional psychology, with its reflection in the ideal of a body of facts and mastery of the symbols of communication as the true content of education, held its own against the newer thought.

The basis for the present changes in subject-matter must be found in the newer psychology. One of the best illustrations of the change in the attitude of mind due to the influence of the newer psychologists may be found by contrasting a course of study such as that issued by the public schools of Boston with examples from progressive school systems like those of San Francisco or of Stockton, Cal. Nothing could better set forth the rocky barrenness of the old curriculum as contrasted with a conservative combination of old aims and new ideals.

The differences in ideals governing the choice of subject-matter are based upon three changes in psychological conceptions of mind, which may be very briefly stated thus: first, the recognition that, as Dr. John Dewey says,¹ "mind is a social rather than an individual affair—that social needs and aims have been most potent in developing it;" second, the idea that intellect or knowledge has, in Mr. William James's words, "but one essential function, the function of defin-

ing the direction which our activity, immediate or remote, shall take;" and last "that the growth of mind is progressive"—"that at different stages the mind has different interests and capacities."²

A general statement of this effect of psychology upon educational ideals may be found in the following formulation by Mr. Alfred Lloyd: "Not history, of whatever events, nor yet science, of whatever branch, but the application to self, is what makes for true culture, and at the present time the ideal in education seems to be to encourage such studies in any individual case as will insure application."³

The problem seems to be to make such selection of educational material or subject-matter as shall keep the child's school life in vital connection with the social life about him and lead him to make application of his increasing knowledge in his own activities.

The continuity of out-of-school life and school life is so evidently maintained in the choice of typical occupations that from this point of view their value seems obvious.

But something of exceptional value is also gained through the continuity obtained in occupations ever necessary and ever present in experience which by means of their social interest carry the child through more or less monotonous labor, thus gaining at last the true incentive to work, the pleasure of the accomplished task.

The danger of appealing to mere sensational and fugitive interests is so minimized through the nature of the material, and the necessity of social organization in even the simplest forms is so obvious, that even the most unconscious teacher will blindly use some of these opportunities, while to a teacher in search of them the choice is only limited by the ever-present need of adjustment to the varying capacities of her pupils. That such material does appeal to children I

(1) *Elementary School Record*, No. 9. (2) *Ibid.* (3) A. H. Loyd, *Citizenship and Salvation*.

can safely leave to the reader's experience. Quoting in support of the choice of such direct and immediate activities for children of the primary grades Mr. Dewey's description of the first part of this period:

"The first stage (found in the child of, say, from four to eight years of age) is characterized by directness of social and personal interests, and by directness and promptness of relationship between impressions, ideas, and activities. The demand for a motor outlet is urgent and immediate."²

One of the strongest points for the use of social occupations, particularly household occupations, for school work is that they are still a part of every teacher's experience, or, if not, can become so with but little effort. The material needed is everywhere available. The problem's chief difficulty, the large number in a class, has been met in other forms of active work by the group recitation system. Every successful primary teacher now works to some extent with groups of ten to twelve children at a time. To use this same method with social occupations such as housekeeping should be a natural step. The amount done is of course sadly lessened, as in everything else, by the necessary repetition of the same work in a class of from twenty-five to thirty-five, while the rest are occupied with so-called seat-work, so that without most skilful planning much time is wasted. But the gain to all the school work in motive and meaning will more than compensate for this loss.

The question next arises: How shall these occupations be applied in primary work? The answers are as various in detail as the situations to be met, and in the end depend, as everything else in the curriculum does, upon individual initiative.

In the absence of any definite limit to the term "primary grades" I have taken the first four grades, covering the ages from about six to ten or eleven years. As requested, I shall limit my illustrations to occupations concerned directly with the preparation of food. The processes here concerned are easily simplified for school use, and in the present empirical state of knowledge hardly afford much

opportunity for use in the later stages of education. That a selection can be made from household occupations which will furnish social and organized material for school work in primary grades, I hope to show, and shall lay more stress on the social value of this work because Mr. Richards, in his preceding article, has shown the general educational relation of organized activities to mental growth.

In all formulations of the value of nature study for primary children one finds repeated the necessity of confining the "lessons" to simple facts and relations along with the aims "to cultivate the powers of clear thinking and careful observation, in order to grasp the simple relations involved." Can the ideal of "cultivating a scientific love of truth" be conceived as appealing to a small child? As a matter of fact, as Dr. John Coulter has observed, "I should be thankful if a child's natural powers of observation were let alone to develop, as they do when not inhibited." Anyone having an ordinary acquaintance with young children knows that they see much more than the ordinary, preoccupied, adult. The things a child sees are, of course, the things that are doing, and those natural objects which suggest use or action to him. His curiosity is naturally excited by unknown materials, hence he sees what escapes others as familiar. The relations he grasps are not the intellectual abstractions of the scheming teacher, but the use primarily to himself or someone else, or later to the plant or animal itself.

To satisfy this interest, and gradually to bring the child through the natural training involved in the first fruit of his observations into social occupations, will not only preserve the original ability to see, but direct it into lines profitable to the socially developing self.

While no one would fail to recognize the value of such nature study as increases the child's understanding of, and sympathy with, animate and inanimate nature through excursions and care of animals and plants in the school, yet there seems to be danger of this kind of nature study becoming a mere addition to the other subjects of the primary curriculum as long as the motives appealed to are

adult in character. As long as the ideals are far removed from action, as are those generally formulated, the tendency to insist on accurate observation of relations and parts having no real meaning to the child will persist.

With the appreciation, however, of the facts of the child's progressive growth, of the dangers of a divorce between intellect and conduct, and of the great part which social life there plays in the individual's development, must come an application of these aims to the choice of more social occupational work for children.

The most obvious place in the present school curriculum, nevertheless, for the use of household occupations as an entering wedge for general social occupations is to be found under nature study, where scattered and perfunctory "plant lessons" can find a natural center in the school garden. Where schoolyard gardens are an impossibility, schoolroom boxes are not. Where a complete kitchen equipment is an impossibility, there are effective substitutes which will pave the way to the social end—the class luncheon. The importance of making the cooking, or whatever process is carried out by the children, serve some end desirable to the child is not often appreciated. Most persons overlook the need for a sufficient motive which appeals to social interest and involves co-operation as well as a recognition of individuals by the social whole. The simplest process which makes something that can be enjoyed by all is complete only when, by keeping the number small at a table (ten or better, eight children), the children themselves can carry out completely the serving of a social meal. Implying, as this does, the cultivation of social amenities and exercise of hospitality, the school then uses one of the strongest of childish motives. The substitutes for the ordinary kitchen equipment are many and various. The two most essential ways of cooking—boiling and baking—can be carried on with two gas or kerosene stoves, using large tin pans as the water reservoirs and small tin cans as the children's individual boilers. Mr. Edward Atkinson has an article in the *New England Kitchen Magazine*, entitled "Every Boy His Own Cook," which gives directions for the construction of an oven

practicable for any schoolroom. Boards and saw horses make practical cooking and dining tables to be placed in the temporary kitchen, screened from the rest of the schoolroom.

Where it seems impossible to use even the most primitive cooking apparatus, such processes as the making of butter, flour, and maple sugar, when performed with the social setting of the occupation typified, may well take the place of the simple cooking processes. As an illustration of one of these processes arranged to present only one or two unknown conditions for the children to meet, the butter-making carried out by twelve little second-grade children who a week previous did not know whence butter came, might be given. The planning of the churning occupied about half an hour a day for a week. About an hour more was needed for the making of the wrappers and dashers. The children gathered together the materials necessary, *i. e.*, they planned what would be needed—churns, baking-powder cans, dashers, wooden sticks, paddles for working the butter, salt, and cheese-cloth and paraffin paper wrappers. In each case, as soon as the children formulated a need and suggested something to meet it, the material best fitted to the need was given them. Under other circumstances more could safely be left to the children. The cream, at the right temperature, was given to the class, and the process was completed in one period of between forty-five and sixty minutes in length.

All conditions of children find a wide field in the use of household occupations, such processes being suggested by the experiences of every home. The particular adaptation made would, of course, depend upon the locality and the experience of the children. In city schools it would be worth while to carry on the simplest processes of food preparation as well as cooking. For example, to dig a real hill of potatoes, to sort, to measure, and save some for seed, and finally to cook others, would certainly be a new and valuable experience for city children. With country children the valuable points would differ widely. The manner of growth of the potato as compared with other underground stems, the action of heat on the cellulose and starch of the

potato, the relation of potato starch to other forms of starch, the value to the plant of such storehouses of food, the care necessary in storing and selecting seed, could all be brought out, whereas such points treated experimentally could be used to advantage only with much older city children.

Those occupations most closely concerned with the everyday home and neighborhood life, which can be so simplified that the child can carry out the processes involved in a short time and with the greatest independence, would naturally be chosen first. The choice for the first two grades would also fall upon such processes as are often repeated and completed in short intervals of time.

When a child carries out processes which he has seen almost daily, he is free to initiate changes in the methods which will enable him to attain his end. The more familiar household activities would, with this basis of choice, naturally precede such occupations as textiles, pottery, metal-working, etc. However, household activities, especially the preparation of food, can be so treated as to hold the attention and afford educational opportunities in the transition stage of the child's development which begins about the time the third grade is reached. This second or transition stage of the elementary period is marked by the beginning of definite consciousness of processes as distinct from ends, and hence ends more remote can be used. The waste

in the past use made of cooking, kitchen-gardening, and laundry in the schools has been that the simpler, more active parts of such work has been delayed until the child gets nothing valuable to him in such simple operations, because activity in itself no longer appeals to him. The beginning of this stage is the moment to meet the child's new intellectual demands through experimental work, by means of which he can feel that he himself is inventing and applying processes to new materials. Such work should lead to (at least at the close of this period, somewhere between ten and twelve years of age) a concrete classification of foods used from various points of view, such as sources, methods of preparation, etc. The new element of arrangement, through a review of his past experience with the satisfaction of a wider view, will furnish the new intellectual element. He will then be ready to apply the methods of the past to new materials whose nature he can determine for himself.

The general educational values, then, of social occupations may be stated as follows: continuity of school and life; their social value as affording opportunity for easy combination of individual and co-operative responsibility with the gratification of strong social instincts; continuity of interest; and use of such simple processes that the child can gradually gain control of ends more and more remote.—*Manual Training Magazine*.

CO-OPERATIVE SCHOOL GOVERNMENT.

A good illustration of the value of co-operative school government was given in Chicago recently.

Principal John T. Ray of the John Crerar school has been an earnest and consistent advocate of the plan of teaching the children the principles of true democracy; he has made them feel that they are a part of the administrative force of the school—rulers as well as subjects. He outlined his system in the form of a constitution four years ago, and then allowed the pupils to vote on it. They adopted it by a large majority. Since then each teacher has had for an assistant one of the scholars in her room, not one that she appoints herself, but one who is elected by the other pupils on the first Monday of each month. This assistant is called upon to perform various duties in connection with the school work, and, in the absence of the teacher, takes the latter's desk and assumes her authority. In order to give ample opportunity for a practical application of the system, it has been customary for the teachers to leave their rooms for brief periods and the result always has been satisfactory. The assistants have been taught to conduct the simpler school exercises, and they have been treated with more consideration and respect than some older people show for their chosen rulers.

Not long ago Principal Ray became ill and one of the teachers had to take his place. This made a shifting of the other teachers necessary, so that one of the rooms was always without an instructor. In other words the scholars in each room in turn had to be left alone while the teacher was hearing recitations elsewhere. This certainly was a good test of the value of the co-operative idea, and it was most successful. There was no sky-larking and no disorder; the children seemed to take a pride in the self-government

accorded them, and so far as possible, everything went along as smoothly and as systematically as if the teacher had been present. Of course the assistant was hardly qualified to hear recitations, but the study time was put in as usual, and many of the more ordinary exercises were undertaken. Then came what may be termed the supreme test of the system. One of the teachers failed to appear one morning and sent no word. Consequently her absence was not known outside of the room, and the children were left to themselves. What would have happened in most schoolrooms in these circumstances is not difficult to imagine, but in this one everything went along as usual, and there was never a word or a sound to indicate to the teachers in the adjoining rooms that the regular instructor was not present. Indeed, it was not until the noon recess, when the youthful assistant calmly marched into the principal's office to make a report, that the true state of affairs was learned. One child had misbehaved, according to the report, otherwise there had been no trouble whatever, and the children had been dismissed in the usual orderly manner at the end of the morning session.

Is it any wonder that Principal Ray is proud of his school and is an earnest advocate of co-operative school government? Doubtless much of his success is due to his individual ability to make the children appreciate and prize the trust reposed in them, but when he brings about conditions that permit of children between the ages of six and fourteen (as these children are) being left to their own devices, with every assurance that order will be maintained and work continued as usual, he certainly demonstrates the value of his system and his methods.

—*Modern Methods.*

THE IDEAL EDUCATION.*

BY PROF. FRANCIS W. PARKER,

School of Education of the University of Chicago.

I seek a jury to try the greatest cause on earth, a cause that has to do with the welfare of every child that lives, and of the millions yet to be, a cause compared with which all other causes sink into insignificance. Where shall I find such a jury? Surely no other jury on earth is comparable to the National Congress of Mothers, into whose hands God has confided the nurture and education of His little ones; this Congress, which is doing more intrinsic good than any and all the parliaments in the world. And yet ages ago this cause was tried and decided. The decisions were made in other times and under circumstances vastly different from those which govern us to-day; but we are still bound by those decisions; they have entered the hearts of the people, and they penetrate and control the majority of mankind. The question calls for great love, a love strong enough to break the awful bonds of tradition, so that we may enter into a new light and a new life.

First of all, and above all, you want good, sound, vigorous health for your children. You want them to have bodies robust, supple; bodies responsive to the will; bodies that can ward off or conquer disease; bodies that will insure long lives of happiness and usefulness.

Helpfulness is a habit that every mother wants in her child. Helpfulness! Around this word center all the good things in this world. Helpfulness of the child; that training and education which makes him efficient in the home, makes him desirous to help others, brings good taste into the home and makes itself felt in the church and in community life.

Trustworthiness is another supreme quality. Its correlative is responsibility, and all true education comes through responsibility. You are anxious that your children shall be truthful, faithful, worthy of respect and confidence.

Teaching, we all hold, is the art of all

arts. It has to do with the welfare of the child and of the world. It is the central thing in human progress. And still, with these truths before us, we know that ninety-five per cent and more of the teachers of this country stop studying their subject, the child, after a few years' practice. They may enter the school room with enthusiasm, but that enthusiasm wanes, they get into a deadly routine and their work is a gyration everlasting. Why? Because knowledge-gaining has few methods. They are simple and may be easily attained. The teacher sees little or no need of improved education. He goes to institutes and is bored by speeches, often by those who have as little outlook as he himself has. To my mind, this sad state of things is all due to the knowledge ideal.

The history of improved education is a very short one. Until very recently the universities of our country practically denied that there is a science of education, and the large majority of professors in the universities deny it to-day. Why? Because they look upon education as knowledge-gaining, and the inference is easily made—there can be no science of education if the teacher can teach the subject after he has learned it. The idea practically controls to-day the education of the country. And then, too, there is great confusion of tongues in the discussion of education. Is there something better than the prevailing education? I am here to say there is. The ideal school is the ideal community, and an ideal community is a democracy. I grant at once that this ideal is not realized anywhere on earth and never has been; but the question before us is, is it right? is it the highest? does it comprehend righteousness? is it attainable and yet never attained? does it respond to the nature of the child? The answer to these questions is yes, and a thousand times yes.

*Abstract of an address before the Congress of Mothers, Chicago.

THE SWALLOW-TAILED INDIAN ROLLER.

SWALLOW-TAILED Indian Rollers are natives of North-eastern Africa and Senegambia, and also the interior of the Niger district. The bird is so called from its way of occasionally rolling or turning over in its flight, somewhat after the fashion of a tumbler pigeon. A traveller in describing the habits of the Roller family, says:

"On the 12th of April I reached Jericho alone, and remained there in solitude for several days, during which time I had many opportunities of observing the grotesque habits of the Roller. For several successive evenings, great flocks of Rollers mustered shortly before sunset on some donatrees near the fountain, with all the noise but without the decorum of Rooks. After a volley of discordant screams, from the sound of which it derives its Arabic name of "schurk-rak," a few birds would start from their perches and commence overhead a series of somersaults. In a moment or two they would be followed by the whole flock, and these gambols would be repeated for a dozen times or more.

Everywhere it takes its perch on some conspicuous branch or on the top of a rock, where it can see and be seen. The bare tops of the fig trees, before they put forth their leaves, are

in the cultivated terraces, a particularly favorite resort. In the barren Ghor I have often watched it perched unconcernedly on a knot of gravel or marl in the plain, watching apparently for the emergence of beetles from the sand. Elsewhere I have not seen it settle on the ground.

Like Europeans in the East, it can make itself happy without chairs and tables in the desert, but prefers a comfortable easy chair when it is to be found. Its nest I have seen in ruins, in holes in rocks, in burrows, in steep sand cliffs, but far more generally in hollow trees. The colony in the Wady Kelt used burrows excavated by themselves, and many a hole did they relinquish, owing to the difficulty of working it. So cunningly were the nests placed under a crumbling, treacherous ledge, overhanging a chasm of perhaps one or two hundred feet, that we were completely foiled in our siege. We obtained a nest of six eggs, quite fresh, in a hollow tree in Bashan, near Gadara, on the 6th of May.

The total length of the Roller is about twelve inches. The Swallow-tailed Indian Roller, of which we present a specimen, differs from the European Roller only in having the outer tail feathers elongated to an extent of several inches."



SWALLOW-TAILED INDIAN ROLLER.
3 s Life-size

COPYRIGHT 1910, BY A. W. MUMFORD, CHICAGO.



2. 7.

THE RED WING BLACK BIRD.

The Bird of Society.

The blackbirds make the maples ring
With social cheer and jubilee;
The redwing flutes his o-ka-lee.—EMERSON.

THE much abused and persecuted Red Wing Black Bird is found throughout North America, from the Atlantic to the Pacific; and it breeds more or less abundantly wherever found. In New England it is generally migratory, though instances are on record where a few have been known to remain throughout the winter in Massachusetts. Passing, in January, through the lower counties of Virginia, one frequently witnesses the aerial evolutions of great numbers of these birds. Sometimes they appear as if driven about like an enormous black cloud carried before the wind, varying every moment in shape. Sometimes they rise suddenly from the fields with a noise like thunder, while the glittering of innumerable wings of the brightest vermillion, amid the black cloud, occasion a very striking effect. At times the whole congregated multitude will suddenly alight in some detached grove and commence one general concert, that can plainly be distinguished at the distance of more than two miles. With the Redwings the whole winter season seems one continued carnival. They find abundant food in the old fields of rice, buckwheat and grain, and much of their time is spent in aerial movements, or in grand vocal performances.

The Redwings, for their nest, always select either the borders of streams or low marshy situations, amongst thick bunches of reeds. One nest was found built on a slender sapling at the distance of fourteen feet from the ground. The nest was pensile, like that of the Baltimore Oriole.

They have from one to three or more broods in a season, according to locality.

In the grain growing states they gather in immense swarms and commit havoc, and although they are shot in great numbers, and though their ranks are thinned by the attacks of hawks, it seems to have but little effect upon the survivors.

On the other hand, these Black Birds more than compensate the farmer for their mischief by the benefit they confer in the destruction of grub worms, caterpillars, and various kinds of larvæ, the secret and deadly enemies of vegetation. It has been estimated the number of insects destroyed by these birds in a single season, in the United States, to be twelve thousand millions.

The eggs average about an inch in length. They are oval in shape, have a light bluish ground, and are marbled, lined and blotched with markings of light and dark purple and black.

BLACKBIRD.

'Tis a woodland enchanted!
By no sadder spirit
Than blackbirds and thrushes,
That whistle to cheer it
All day in the bushes,
This woodland is haunted;
And in a small clearing,
Beyond sight or hearing
Of human annoyance,
The little fount gushes.—LOWELL.

ANARCHY AND THE PUBLIC SCHOOLS.

PROFESSOR M. VINCENT O'SHEA,
University of Wisconsin.

Make in our breasts the living fires,
The holy faith that warmed our sires;
Thy hand hath made our nation free,
To die for her is serving Thee.

At this dark hour when the nation is bowed with grief over the tragic death of our beloved President, every man is asking himself the question, How can a similar tragedy be averted in the future? To this query various answers will be found. Some persons will think anarchy must be forcibly driven out of the land or throttled on the spot; those who express hostility to the established forms of government must be isolated from their fellows, or deprived of life altogether. But there is ground for predicting that little genuine and lasting good will come from proceeding in this manner, though it is the way in which our instincts first prompt us to act. To suppress an evil by the direct application of force always seems to be the simplest and surest and justest way to get rid of it; the hanging or drowning or banishing of all who call themselves anarchists would seem to many to be the most effective way of solving the problem which just now presents so formidable a mien.

But the records of the past, especially those that relate to the correction of wrong doing, teach us that repressive measures alone have never had much successful issue in obliterating crime or curing criminals. Negation as a method of discipline has always failed of begetting either individual or social reform in any such degree or with such permanency as the men who believed in it have hoped and prayed for. Society really appreciates this, for it has abandoned the policy of direct suppression for the positive method of modifying the conditions out of which crime has been developed, in the case of young criminals at any rate. A young offender against the social order is no longer in these days thrust into jail, and there subjected to a course of treatment based upon the principle of whipping crime out

of a person; but instead there are opened to him the doors of the reformatory, wherein his mind will be filled with thoughts and his heart with impulses which will make him a friend instead of an enemy of his fellows. His criminal tendencies will thus be restrained, inhibited by social tendencies which will be implanted through instruction, and through the discipline of wholesome environment and companionship.

And the momentous problem which now stares us in the face must be solved in view of the same great principle of supplanting an anti-social life by one in harmony with the institutions of mankind. Anarchy, the protest against all law and order, can never be effectively stamped out by punitive proceedings merely; it is rather to be feared that the type of mind which espouses anarchistic doctrines at all will be incited to more irrational and outrageous beliefs and deeds by a policy of direct chastisement in the effort to exterminate it. So we must come back to the real source from which the modification of individual and social action must proceed—the school; the school in the broad sense, including all the forces which operate upon life during the formative period, when tendencies of either a social or anti-social character are being established. Then, of course, the school in the narrower sense, the institution which exists solely for the purpose of training the child to be a member of society, has the chief work to do in bringing him into alignment with his fellows, and in counteracting the influence of agencies which seek to alienate him therefrom.

That the public school in America has had good success in this direction in the past can not be doubted. The act of the Buffalo assassin does not indicate, as many seem to feel, that the country is unsound at the core, and is on the verge of ruin; and that there is a large body in our country that is hostile to the existing social order, even to the extremity of the assassin's hatred and desperation. On the contrary, the evidences lie all

about us that practically all of the people, while perhaps not as a whole fully content with the government as it is, are still not by any means its deadly enemies; but that they are really in heart its loyal supporters and defendants. The public school has certainly fulfilled its obligation with a good measure of faithfulness and success in leading the people of the country to appreciate the advantages of life in a social regime like our own; and it has instilled a just regard for the principles upon which our institutions are founded, a fact which is testified to by the quick and generous response of the people to the call of the country when in need.

But probably no one will contend that all has been done that can be or ought to be done. The school has not made the love of our native land supreme above the love of self among certain of our people who should be wise counsellors to the multitude, but who instead incite irreverence for and enmity to our institutions. I refer especially to the managers of some of our newspapers who daily present to those persons least capable of forming correct independent judgments of things ideas which belittle our government and its officials, from the chief executive down. And what can we expect more than that a man bred under a foreign flag, who has heard nothing from infancy but abuse of the powers that prey upon the people, and who has daily felt the sting of outrageous fortune—how reasonable it is that such a man absorbing daily the moral poison conveyed to him through "yellow" journals should in time become saturated with it, when he is certain to acquire disrespect and enmity for those who in our republic execute the will of the people as expressed through their laws.

The marvel is that moral disease is not spread abroad more extensively by these means of infection. At least it is not to be so much wondered at that one who sees the chief executive portrayed every day as a self-adulating simpleton, seeking ever to gratify his own selfishness instead of using the power in his hands wisely so that all the people may be prospered in their lives and fortunes—it is really not to be marveled at that

such things, spread day after day before the eyes alike of the best and meanest among men, should breed antipathy for the President in the breasts of those who have bitter remembrances of the oppression of rulers, and who have a native hatred of all law and order.

What the school must do now more fully than it has done in the past is to develop in every pupil such a regard for the laws and institutions of this country and those who are chosen by universal suffrage to administer them, that he can not deliberately and with malicious intent caricature or disparage them merely for private and partisan gain. We ought to find a way to breed in our youth a spirit which would make such conduct on the part of malcontents impossible; which would, if no other plan be feasible, prevent such treasonable behavior by rendering it commercially disadvantageous. And this respect and love for our country, this devotion to its laws and institutions, in principle at any rate, can never be nurtured to vigorous, hardy growth in the young by a mere formal study of the machinery of government—by formal lessons in civics and political economy, by learning the officers of government and what duties they perform. Mechanical conning of the definitions of government will never fill the hearts of youth with genuine enthusiasm for the institutions of our country. But some schools still do little else for their pupils beyond this formal teaching of civics. The instruction in this department is, perhaps, not more mechanical and fruitless than it is in others, but the outcome here is more deplorable, for it is so absolutely vital that the activities which it is intended to inspire should be acquired by every individual.

Some of us know how cold and indifferent our text-book study of civics in the elementary and secondary schools left us; what little feeling it aroused for the principles of liberty and freedom which give health and strength alike to our political and our social life. A boy's learning by rote that there is a president of the United States elected by the people, and a congress chosen in the same manner; and his reciting their duties trippingly on the tongue, will not necessarily make him a friend of either the

President or Congress, or a champion of the forms of government which have brought them into existence, and which make their continuance possible.

The sort of training for that kind of citizenship that we need to develop in our land must be set a-going in an objective way at the outset of the school course; the child must from the start be made to feel in a concrete, realistic, vital way the operation of a free and just government all about him in the circumstances of every day life. He must be led to appreciate the reasons for the doing of the thousand things which the regulations of his community constantly enforce upon him and his fellows, and he must be made to realize, not in definitions and verbalisms, but in persons and actions, the source of authority for these regulations, and by what right certain individuals are clothed with power to compel their observance. This direct face-to-face and hand-to-hand contact with laws in a democracy, both in their operation and in their making, if continued throughout the school course will not fail to win from our youth respect for and confidence in our institutions. This will be the most effective of all antidotes for the riot and madness and chaos of anarchy.

Emperor William is putting the principle into operation, although in a very imperfect way, when he arranges for the school-boys of Germany to spend a few days on his warship and see and hear and feel what is there presented, instead of simply learning words about it all in some class-room, practically as remote as the ends of the earth from the real heart and life of things. One is reminded of Rousseau's remark, incited by the verbal teaching of his day, which is not yet wholly remedied. "In any study," he says, "words that represent things are nothing without the ideas of the things they represent. We, however, limit children to these signs, without ever being able to make them understand the things represented." Locke hits the point exactly: "Words," he says, "are of no value when used, but as they are the signs of things; when they stand for nothing they are less than ciphers, for instead of augmenting the value of those they are joined with, they lessen

it and make it nothing; and where they have not a clear, distinct significance, they are like unusual or ill-made figures that confound our meaning."

The contention is that at every step the child must be put in the way of feeling the spirit of our government by handling and tasting it, as it were, and so getting to know it, instead of learning about it from afar off. He must be made to realize the truly democratic character of our rulers' lives by seeing them at their homes, observing that they live as does any other citizen; indeed, that they are just ordinary citizens charged with special duties, but acquiring no autocratic or arbitrary or oppressive power thereby, as the anarchist pretends to believe. Let the life of the President of our country be contrasted with that of the crowned heads of the old world, who are surrounded by armies of servile attendants, and whose main effort seems to be to show that they are not of the people but elevated above them. Recently the writer passed a few days at Canton and saw something of the President shortly before the Buffalo tragedy, and no one who observed him under those circumstances, simply as a plain citizen, indistinguishable from his fellow townsmen except for his noble bearing and appearance, could fail to appreciate to what heights of democracy and political equality we have already ascended. The hand of the assassin would surely have been stayed if he had seen the President in this light, instead of regarding him as an arbitrary tyrant, gaining tithes from the downtrodden and oppressed for his own pleasure, and that of his accomplices in thievery, as yellow journalism has too oft depicted him.

And the youth of the land must be steadied and calmed in their criticisms of the existing order of things, and in their pursuit of alterations and reform, by being led to reflect upon the infinite complexity of the social mechanism and the utter futility of attempting to revolutionize everything in a twinkling of the eye by taking the lives of leaders, or in any other violent way. Formal lessons in civics, where all is cut and dried and mechanically simple enough, do not leave the right impress upon a pupil. He is

apt to come out with the conviction more or less clearly formed that the modification of government is an easy matter—simply write a law in the statute books, or wave a magic wand, or it may be, an assassin's pistol. Our schools do not implant in the minds of youth with sufficient vividness the idea of the intricacy of the social organism which makes it so extremely difficult to bring about radical changes quickly, since so many interests are affected thereby; and people have become adjusted to a certain order of things, and any attempt to have them readjust themselves in a violent manner will, as surely as the sun pursues its course, result in serious disturbance to the whole community.

Let the instructor study the situation on the pupil's own street; let revolutionary measures be proposed, and trace out their effects upon the lives and fortunes of his neighbors. Let this concrete matter be carried into the study of government in the town as a whole, and the state and nation, and a condition of mind will be engendered in the pupil which will enforce upon him respect for things as they are. He will leave the school after this experience better poised and balanced; better prepared to fill the place of

a citizen in a republic. He will have at least some appreciation of the struggle through which the race has passed in attaining its present position of democratic government, by the people, for the people, and of the people, and he will not be so ready to lend a hand to cause it to perish from the earth. He will not be led astray by the insane ranting of anarchy, to the effect that all law and government are inimical to the prosperity and happiness of mankind, and that all servants of the people in high places are but vampires, sucking the blood of their fellow men, and deserving of extermination by any means, however summary or cruel. The anarchy bacillus can never flourish in a mind that has once been treated with the germicide that the public school can and ought to administer to every pupil; and the thing consists in bringing our youth into real, vital relationship with our laws and institutions, beginning with the most concrete and obvious things in the home environment and growing gradually toward larger and more general things, the instructor never resting satisfied with mere verbal knowledge on the part of his students.—*The World Review*.

THE EDUCATIONAL IDEALS OF LELAND STANFORD.

BY DR. DAVID STARR JORDAN.

Our university is now just ten years old. Of all foundations in America it is the youngest save one, the University of Chicago. Yet, as universities go in our New World, it has attained its majority. It is old enough to have a character and to be judged by it.

For the broad principles of education all universities stand, but each one works out its function in its own fashion. It is this fashion, this turn of method, which sets off one from another, which gives it its individual character. What this character shall be no one force can determine. Its final course is the resultant of the initial impulse, the ideals it develops, and the resistance of its surroundings. In our own university the initial impulse came from the heart and brain of Leland Stanford. The ideals it has upheld were

his before they were ours. They had been carefully wrought out in his mind before he called like-minded men to his service to carry them into action. It is well once in a while to recall this fact.

Mr. Stanford shared with Agassiz the idea that the essential part of education was a thorough knowledge of some one thing, so firmly held as to be effective for practical results. He believed in early choice of profession in so far as early choice could be wise choice. The course selected, however broad and however long, should in all its parts look toward the final end of effective life.

Mr. Stanford's belief that literature and engineering should be pursued side by side was shown by his wish to provide for both with equal generosity. And the students of each are the gainers by this

relation. The devotee of classical culture is strengthened by his association with men with whom their college work is part of the serious duty of life. On the other hand, the student of realities gains by his association with the poet, the philosopher and the artist.

That women should receive higher education as well as men was an axiom with Mr. Stanford. Co-education was taken for granted from the first, and the young women of Stanford have never had to question the friendliness of their welcome.

Compared with the character of the faculty every other element in the university is relatively of little importance. Great teachers make a university great. The chief duty of the college president is the choice of teachers. If he has learned the art of surrounding himself with men who are clean, sane and scholarly, all other matters of university administration will take care of themselves. He cannot fail if he has good men around him. And in the choice of teachers the element of personal sanity seemed of first

importance to Mr. Stanford—the ability to see things as they are. The university chair should be a center of clear seeing, from which right acting should radiate.

The growth of Leland Stanford Junior University must remain the best evidence of its founder's wisdom. He had the sagacity to recognize the value of higher education and the patriotism to give the rewards of a successful life to its advancement.

If the founder we love and the founder whose memory we revere had said, "We will found a university so strong that it may endure for all the centuries and whose organization shall be so free and flexible that in each age it shall reflect the best spirit of the time," he could not have given it greater freedom of development than it has to-day. For the glory of the university must lie in its freedom, in that freedom which cannot fall into license, nor lose itself in waywardness, that freedom which knows but one bond or control, the eternal truth of God.—*Western Journal of Education*.

AMERICAN ARTISTS IN THE SCHOOLROOM.

G. D. C.

Although the history of American Art is of no great importance in comparison to that of the leading nations of Europe, yet it possesses great historical interest, throwing a strong side-light upon the social and spiritual development of the American people in various periods. To suggest the value, in connection with the school work in American history, of some general study of the lives and works of our own painters and sculptors is the purpose of this article.

No pupil goes out from our schools nowadays without at least an elementary knowledge of some of the masterpieces of American literature. Longfellow, Whittier, Holmes, Poe, Irving—these are familiar names in all the schools, their works studied, their life-story made the subject of innumerable compositions. Our artists, however, are still quite neglected. Only recently has any interest at all been shown in them. Not every eighth grade pupil can tell you who All-

ston and Copley were, nor do the valuable reproductions from American masters in the history books get the careful study they merit.

Needless to say, there exists an excellent opportunity for instruction along this line. It should take a two-fold direction.

There should be primarily study of pictures by the great American artists—this upon the principle of approaching an artist through his works. Whatever illustrations occur in the history textbooks, portraits by Copley, Gilbert Stuart, and Chester Harding, battle pictures by Trumbull, statuary by Greenough, Crawford, Ball, St. Gaudens, or any of the other sculptors—such specimens of art ought not to escape the careful attention of teacher and class. Then, too, there should be a more detailed study of whatever inexpensive reproductions can be obtained of good American art, especially that of the earlier period of our

history. In this way children will get some idea of the progress of this nation in the field of fine arts.

Much more than this can, however, be done. It is fair to most of the artists of our past history to say that as men they were far more interesting than as artists, for it is inevitable that a man struggling to produce art under adverse circumstances shall not put forth the best account of himself. One is impressed in reading Flagg's monumental life of Washington Allston with the great superiority of the artist's ideals and theories of art to the things he actually produced. Too many creditors were nagging at him to let him say in peace what he wanted to say. And so it was with most of Allston's contemporaries. Several of the early men were richly endowed so far as temperament and talent went, but penury and lack of appreciation retarded them all. The story of their struggles in a raw, crude country will certainly be of interest to pupils in the higher grammar grades and in high schools.

The most natural method of presentation is by means of an occasional talk or digression by the teacher, the substance of her talk always being confirmed in an essay by the children. Where the good custom of Friday morning exercise prevails, the subject can very well be presented in a series of three or four short lectures. If the stereopticon can be employed, so much the better. The thing always to be aimed at is to present the artist in his relation to his environment. Something of an ethical aim may well be included. It is safe to say that the teaching of American history as ordinarily carried on in the schools is responsible for a great deal of flamboyant patriotism and lack of perspective. The glorification of the American people has always been its central theme. Here is an opportunity to flash for a moment the other side of the shield. Let the children see that there is a point of view from which our history is not all glorious; that in some important respects we are still behind "the effete monarchies of the old world." Especially is it important that in this day of industrial triumph we shall be saved from becoming victims of a shallow optimism.

How rich in color the historical back-

ground is can only be suggested. One might start from Copley, the successful portrait painter of late colonial days. Governors and rich merchants sat to him. His dress was rich and sumptuous. A young lad from Connecticut calling upon him found him dressed in velvet and occupying quite the handsomest house in Boston. Small wonder that the lad determined that he, too, would be a portrait painter. Copley became an even greater man than when Trumbull first visited him, but not in this country. His father-in-law was the agreeable gentleman to whom a certain famous carload of tea was consigned, destined never to be delivered in contumacious Boston. Copley himself was a good Tory and, appalled by the rising spirit of revolution, he left the country in 1774. While the children are studying the period of the Revolution it would be an excellent idea to read them some extracts from the "Autobiography of Col. John Trumbull"—a fine old book which deserves to be better known than it is. Trumbull was a delightful example of the spirit of '76, arrogant, boastful, honest, confident of his ability to execute any sort of scheme, however vast and apparently impossible. As an artist he never learned to draw, but his grandiose compositions, now in the possession of Yale University, are among the most valuable of our Revolutionary documents.

Washington Allston's life story is one of the most pathetic in the history of art. Abroad he had either gained or was in a position to gain, every honor that could befall an artist. He was the warm friend of Coleridge and Wordsworth. Everybody had picked him for the next president of the Royal Academy. Unfortunately he was induced to return to the United States where, under the influence of neglect, lack of appreciation and constant money worries, he failed signally to accomplish any of the wonderful things which had been predicted for "the American Titian." Children, especially those who can occasionally visit the Boston Museum of Fine Arts, where is the best collection extant of his works, ought to be made very familiar with the story of his life.

Nor should the historical background be ignored. Allston lived in the days of

the "Kitchen Cabinet," of "Peggy" O'Neil and "Duff" Green. He was a gentleman of the old school in an age when manners and morals were changing, and all for the worse. There is no more interesting way of studying this period of our history—Harry Thurston Peck calls it the "tobacco-juice era"—than through the lives and letters of men like Allston, Gilbert Stuart, Chester Harding and Horatio Greenough.

A little later there followed a school of landscape painters—the men of the so-called "Hudson River School." These artists set out to do what most untrained persons let loose in front of the panorama of an American landscape with a box of paints at hand will attempt. Their ambition was to put all out-doors upon a single canvas. They succeeded for the most part rather badly, though a few of their works, such as Church's "Niagara," now in the Corcoran Gallery, Washington, and some of Albert Bierstadt's Rocky Mountain studies, have a permanent art

value. Of the men of our own times it would be difficult to say which are most worthy of study in the schools. The teacher would have a large range of choice. Certainly the late William Morris Hunt would have to be included in any list, so important was his work of bringing to America the methods of painting and habits of observation he had learned while with Millet at Barbizon. Other great artists now living, such as Sargent, St. Gaudens, Brush, Thayer and LaFarge should not be ignored. Abundance of biographical matter about them can be found in magazines by anyone who will look it up, with the aid of Poole's Index.

The essential thing is to get into the schools some little study of American artists. Very much is already being done to give children an appreciation of the masterpieces of the world. It is well to leave no stone unturned.—*The Popular Educator*.

THE PERSONALITY OF THE TEACHER.

BY HELEN L. GRENFELL,

State Superintendent Public Instruction, Denver.

The greater part of education is the teacher. While environments influence education, the teacher is the leading factor. Good environments and a good teacher will make an ideal school. A good school may be had with poor environments and a good teacher, but good environments and a poor teacher will inevitably make a poor school. School boards can make good environments, but teachers are self made. All the psychologies, all the summer schools, all the pedagogical training in the world, while of great value as means of aiding development, cannot alone make one good teacher.

The teacher's personality does not differ in any sense from that involved in true manhood. It does not compromise manhood. It does not make a man one-sided or develop a peculiar or freakish nature. The true teacher should not be recognized as a teacher in a crowd, either by his talk, his actions or his ap-

pearance. He will be a man, or she a woman, fully developed, abreast of the times, alert to all that is occurring, firm, sympathetic, high-minded, conscientious, uncompromising in the right, one that shapes opinion, leads thought and makes success to follow in his wake. He is one that lives in the lives of his pupils for decades after they are separated from him, whose thoughts and sayings are quoted by them and lived up to by them when his mortal frame has returned to the dust.

Perhaps no other man of his time exerted so far-reaching an influence as Arnold of Rugby, for he impressed the stamp of his nobility and his culture upon thousands of boys at the critical period of their lives. The life and work of Mary Lyon, of Mt. Holyoke Seminary remain an inspiration to countless women who follow her profession.

Teachers like these shape character, mould thought and fashion sentiment.

If it be said that such people are rare, I reply that true teachers are rare, but may be common as soon as the proper conception of what constitutes a teacher is realized.

Personality is the sum total of heredity and acquirement. It is the original web with all that has been woven in it during the term of our experience on earth. This original web, given us to complete has been changed, modified, colored, adapted by all our experience, all our suffering, all our acquirements, so that what we are today is our personality. A complete personality of any individual would involve the impressions, the intellect, the will, and their development. I say their development, for all—the will, the emotions and the intellect must be developed. None of these are fixed quantities, incapable of being changed. An educated person is not one in whom one of these have been developed, and the others not altered, but one in whom there has been a harmonious development of all. Too much stress has been laid in the past on the education of the intellect of the teacher, and practically none upon the development of the other faculties. An educated man is a complete man, complete in the entirety of his development—educated in every direction.

A teacher that is equipped for his work is one that has within himself and at his command all the elements through which he may command all the resources of the pupil. This command will not need to be expressed in words in most cases, but will be enforced through the personality of the teacher. The contact of person with person will, in the majority of cases, reveal to the child something more peremptory than a command. The personality of the teacher may be revealed through a look, through a tone, through example, and in many other ways may be felt and acknowledged by the pupil. The medium by which the fully equipped teacher expresses himself to his pupil has never and can never be adequately expressed in words. It is beyond artificial language and yet pupil and teacher will never be mistaken in its meaning. The pupil knows that the teacher is with him, that his highest

pleasure or welfare is the teacher's greatest joy. For the teacher to be in this condition is to be ready to impart something to the child. Soul to soul must be the existing attitude, as well as mind to mind. And this must come as an involuntary as well as a voluntary condition.

Human beings are so constituted that they touch each other in many ways. Eye touches eye, heart touches heart, intellect, intellect, and soul, soul, as well as hand, hand. The totality of these is the personality. The personality of one being influences that of another. The teacher who depends alone upon the intellectual process to influence and control the life of his pupil is using only a small portion of his capital; the remainder is by far the most valuable and the part that of all parts he should use.

In examining our ideal of the teacher's personality, we naturally ask may it be shaped or moulded at will? The fact that personality is acquired shows that it is subject to change, that it can be added to, neglected and in a measure lost. If this be true, the great responsibility of the teacher is to cultivate or develop this personality. He must feel in the depths of his soul that when he acts a teacher, he must also be a teacher. There is no escape from this. He is paid for acting and the world will hold him responsible for being a teacher.

Matthew Arnold says, "The teacher will open the children's souls and imagination the better, the more he has opened his own." It is a duty of all teachers to open their own souls and imaginations, and to do their utmost to correct the tendency to professional narrowness. The constant association in the school room with a little community of intellectual inferiors will naturally incline a teacher to fall into pedantic and dogmatic ways, and even the praiseworthy absorption in his work, that is characteristic of the best teachers, should be so regulated that they are able to leave that work and all its details, during some portion of each day, and throw themselves with an equal ardor into the varied interests and pursuits of their social world outside of school.

The teacher should never be satisfied with his scholarship or his professional attainments. If he has a second grade certificate, he should not rest until he obtains a first grade; if he has a first grade, he should desire a state diploma, and if possible, attain a degree in some university. The course of many principals and superintendents now seeking a degree in our universities, is a highly commendable one, and one that all should, if possible, emulate.

The teacher should be an all-round man. There is no side of manhood he should not develop. He should strive to understand all the different business callings in the locality where he is employed. An interest in them that enables him to talk intelligently and sympathetically about them, will be an open door to the interest and attention of the child and the parent. By mingling with both child and parent in their neighborhood interests, he becomes one of them and does not appear as "a root out of dry ground." The teacher that does this, if he is at all fit for his place, will surely hold it. Many teachers act in this way, but from a purely selfish motive. They do it as a policy to build up themselves rather than their work. The teacher who cannot in these matters act beyond himself is not fit to be a teacher. There were advantages in the old "boarding

round" system. It gave the teacher an opportunity to enter into sympathy with the child in his every day life and to take into consideration his pupils' environment when associated with them in the school work.

The teacher should strive in every way to improve his conversational ability. Nothing will help him more to win his way into the good graces of the community in general than the ability to talk well and also to listen well; to tell with ease and grace what he knows of any subject. This was one of the strongest traits of Benjamin Franklin, one that was not only useful to him in his ordinary relations with his fellow men, but that stood him well in hand when he was minister plenipotentiary to France.

There are many ways of aiding ourselves in cultivating the true personality,—seeking a broader culture of intellect and heart, improving our opportunities for conversation upon many topics, taking an interest in our neighborhood and in public affairs, learning to see our work in its true perspective, and giving it its rightful place in our lives.

In thus achieving the best possible to our own character and individuality, we will do what will most benefit the young people in our charge.—*The Teachers' World*.

UNIVERSITY-TRAINED TEACHERS FOR GRAMMAR SCHOOLS.

It is significant of the changing attitude toward the real function of the public schools that the audience at one of the general meetings of the National Educational Association at Detroit heartily applauded President Thwing's declaration that the teachers in the grammar schools ought to have a university education. Although even the most optimistic advocates of higher scholarship and broader culture for teachers in the public schools expect a good part of the new century to pass away before the grammar schools will be taught by university-trained teachers, there are seen now and then indications of a desire for better educated teachers in the two or three grades below the high school. It is beginning to be seen that the most direct way to enrich the grammar school course is to place in these schools teachers who themselves know the liberalizing influence of a comprehensive course of study which extends at least four years beyond the high school course. While we have got far beyond the point in this country of looking upon reading and writing and arithmetic as the goal of popular education, a good deal yet remains to be done before the popular conception of public school education will be that its chief purpose

is to lift the masses of the people to a higher plane of intelligence and to bring to them a fuller participation in the nobler intellectual and spiritual achievements of the race. When the public mind comprehends the truth that the individual is to be educated, not simply to make him an intelligent voter or a successful money-getting machine, but because he possesses certain inborn capacities for growth and development, for usefulness and happiness, we shall begin to appreciate the real significance of placing educated and cultured men and women in charge of our grammar schools. Sometime the public schools will stand for an education that means the richest and fullest intellectual life of which every human being is capable. When that time comes, the present courses of study, so meager in intellectual content and rendered still less life-giving by the process of mechanization which goes on under the name of method, will have taken their places among the crudities of educational progress. There is cause for satisfaction in the fact that President Thwing's sentiments concerning university-trained teachers in the grammar school were so heartily approved at the Detroit meeting.—*Editorial in the Journal of Pedagogy.*

THE EDUCATIONAL VALUE OF NATURAL HISTORY MUSEUMS.

BY FRANK COLLINS BAKER,

Curator of The Chicago Academy of Sciences.

What is a Natural History Museum, and of what value are its collections to the general public and particularly to the educational forces of the twentieth century? These are questions which are frequently propounded to the Museum Director or Curator, and they should be intelligently answered.

The writer would define a Museum of Natural History as an encyclopedia of

natural objects and phenomena; and its value to the public and to education, it is needless to say, is far in excess of that of an encyclopedia because in the museum the objects themselves are exhibited and correlated, while in the encyclopedia they are simply pictured and described. Dr. G. Brown Goode once defined a museum as a collection of well-written descriptive labels, illustrated by a few well

selected specimens. The writer would enlarge upon this definition and add that the collections form a continuous text-book; the specimens being so carefully and intelligently arranged and classified that even an untutored visitor may be able to grasp the broad principles of the science and carry away with him a clear idea of the subject.

The tendency in some museums has been to exhibit so much that the mind of the visitor or student is bewildered and he goes through the exhibits in a dazed manner. The old fashioned museum exhibited case after case of species and genera of shells, minerals, fossils, insects, etc., arranged in strict accordance with classification, but without explanatory labels of any description. This is a mistake and is gradually giving way to the more rational method of exhibiting only typical specimens of each group or family, accompanying the same by a number of printed labels which give all necessary information about the group, while the great mass of material, the study series, is arranged in drawers beneath the cases, in paste-board trays.

The birds, instead of being mounted in conventional positions on artificially turned perches, are now being mounted in groups, showing the male, female, young, nest and eggs, the whole group being accompanied by a carefully printed descriptive label. The small mammals are being mounted in like manner and the larger mammals in large and instructive groups. The smaller bird groups may be seen in the Chicago Academy of Sciences and the larger mammal groups in the Field Columbian Museum.

The old methods of labeling are rapidly giving way to more modern and advanced methods of museum installation, so that these institutions are today gigantic text-books, educating the public unconsciously, and opening their minds to a new and fascinating field of pleasure and profit.

Let me mention a few of the subjects which are of value to both the teacher and the layman. Take the subject of geography, for example; there are many helps in a modern museum for the study of this subject. In the Chicago

Academy of Sciences the cases of corals are so arranged and labeled as to give a clear idea of the growth of coral reefs. Figures are given showing the method of building barrier and fringing reefs and atolls, and a large map surmounts the case showing clearly the geographical distribution of coral reefs throughout the world, together with the principal kinds of reefs. The teacher will see at a glance that coral reefs are confined almost entirely to the belt or zone bounded on the north by the Tropic of Cancer and on the south by the Tropic of Capricorn. It will also be noted that the reefs are more abundant on the eastern sides than on the western sides of the continents, on account of the warm currents of water, as the Gulf Stream and the Equatorial currents.

So also the teaching of physiography, which is geography in a wider sense, may be greatly assisted and simplified by the modern museum. In his geography the child reads about glaciers, rivers, valleys, icebergs, limestone caves, etc., and gathers from the figures and descriptions only a shadowy conception of the things described. In the museum he may see these gigantic natural phenomena illustrated by models, which to him are miniature examples of the objects themselves. Models and relief maps illustrating the formation of islands, peninsulas, coral reefs, mountains, valleys, etc., are also to be found in the museum, and are invaluable aids to the study and teaching of this subject. A single example of this kind of model will suffice to illustrate this point. In the Chicago Academy of Sciences there is a model which illustrates the cutting and tearing down power of the sea. A high cliff is shown which faces the open sea; this cliff is cut into thousands of fissures and crevices, and the material cut from this cliff is shown to be carried around the headland into a sheltered bay where it is deposited in the form of sand dunes. Near the headland is an island which has been made by the cutting away of the land between the latter and the mainland. This is but one of the examples in which the museum is a valuable and practical help in the teaching of geography.

In the study of the natural objects of any country, the museum is of very great value, for in it the resources of the different states or countries are exhibited in such a manner as to give every facility for the study of this subject. For example, the collection of economic mineralogy in the Chicago Academy of Sciences is so arranged that the gold, silver, lead, mercury and other ores are placed in groups, each group showing the different minerals (ores) from which the metal is extracted, and enough specimens are shown to give a good idea of the products of different states, a large label accompanying each group, as the gold ores, which gives the number of ounces and the value of the yield of each state for a given year.

In the museum of comparative zoology at Harvard University, this idea of comparison is developed to the fullest degree. Each zoological province occupies a separate room in which the animals characteristic of that locality are exhibited and suitably named. For example, the visitor enters the South American room and here finds the animals peculiar to that region, humming-birds, armadillos, sloths, ant eaters, etc., while in another room he will see the animals indigenous to Australia, kangaroos, echidna, and the duck-billed platypus. In the same manner each country is represented and a very excellent comparison can be made, which is certainly of much educational value. For a class in geography to visit such a museum must be productive of much good and will be of permanent value.

The modern museum is rapidly adding to its exhibits material illustrating the manufacture of many articles of economic use; as examples of these may be mentioned carborundum, emery, aluminum, steel, pearl buttons, etc. These objects are so arranged as to illustrate completely the manufacture of an article, from the time the raw material

leaves the earth until the finished product is ready for use. In addition to the specimens, photographs and other illustrations are used to depict the different processes of manufacture.

The foregoing examples could be indefinitely increased, but they will suffice to show that a natural history museum is of vast educational value, not only to the teacher and student but to the ordinary museum visitors, who today crowd our scientific buildings by millions.

The museum is also a bureau of information for the teacher, and its officers and employees are (or should be) always willing and pleased to lend their aid in the solution of any problems which may vex the mind of the teacher or other visitor.

Not the least important part of the work of a museum is the presentation of scientific information by means of popular lectures. These are generally given by persons who are masters of their subjects and are able to clearly outline the general principles of the science. In many scientific institutions this feature has proved of incalculable educational value, and it is rapidly becoming a notable part of the work of the modern museum.

It is generally conceded at the present time that the study of nature is, next to mathematics, the best subject for the broadening and training of the mind. In pursuing his biological studies the student forms the habit of close observation and of careful discrimination, and acquires the useful ability of describing whatever he sees in terse and comprehensive language.

In these days of general advancement, when libraries are springing up on every hand, the museum of natural history needs no apology for its existence, for it is at once a school, a library, an encyclopedia and a place of recreation.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A DICTIONARY OF EDUCATIONAL BIOGRAPHY.

This book contains more than four hundred portraits and sketches of persons who are prominent in educational work. Mr. C. W. Bardeen, the editor, began collecting these portraits some twenty years ago, and to obtain them has searched most of the print-shops in the principal cities of this country and of Europe. The work contains a chronological index, which is very interesting. There is also a classified index, where the names are grouped under titles indicative of the special fields in which the individuals were interested. (\$2.00. C. W. Bardeen, Syracuse, N. Y.)

A, B, C BOOK OF BIRDS.

Miss Mary Catherine Judd, the author, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. For the children a fun-provoking rhyme is given with each picture, and a short prose description makes the illustrations interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as the author of "Classic Myths" and "Wigwam Stories." (\$1.00. A. W. Mumford, Chicago.)

BIRDS OF LAKESIDE AND PRAIRIE.

This book will contain field sketches of bird life in the great middle west. Mr. Edward Brayton Clark has been a close student of nature in a section of the country where wild bird observers have been many and bird writers have been few. The author takes his readers afield with him and puts them in close touch with our feathered friends of lakeside, woodland and prairie. The bird byways of Illinois, Indiana, Michigan, Wisconsin and other great middle western states are thoroughly explored. Mr. Clark is known to the reading public through his many bird articles which have appeared in the *Chicago Tribune*, and in the different magazines of the country. He is, perhaps, still more intimately known to readers by the articles from his pen which have appeared several times a week

on the editorial page of the *Chicago Times-Herald*, now the *Record-Herald*. The illustrations in "The Birds of Lakeside and Prairie" are from colored plates, prepared for "Birds and Nature," and slightly reduced in size. Mr. Clark's work is characterized by a fine literary style. (\$1.00. A. W. Mumford, Chicago.)

BIRDS OF SONG AND STORY.

Elizabeth and Joseph Grinnell, the authors, are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of outdoor study for many years, but have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends. The habits of every feathered friend of the doorway and of the deep woods are known to Mr. and Mrs. Grinnell just as intimately as are the legends and the folklore of other ages touching the same bird. The title, "Birds of Song and Story," is an eminently fitting one for the book, for in a few words it describes thoroughly its scope. There is a charm about the writings of both these authors that will appeal strongly to all lovers of good literature, especially to all who love at once to read the printed page and the book of nature. Artistically, "Birds of Song and Story" is as nearly perfect as it is possible to make a book. (\$1.00. A. W. Mumford, Chicago.)

EARTH, SKY AND AIR IN SONG—BOOK I.

There has never come to our notice a song book for children which is so attractive, both in its educational and its artistic features, as the present book. The first of a two-book series, it aims to aid the youth of our country in forming the habit of observing Nature. The author, Mr. W. H. Neidlinger, in writing the words of these songs has used the child's language and recognized the child's sense of humor. In the music he has adhered naturally to the elocutionary expression of the text. These two features are of great importance, and if borne in mind excellent results will surely be obtained. The pictures by Mr. Walter Bobbett are no less educational than the songs themselves and form a vital part of the book. Many of them are in colors, and

all have been made especially for the songs with which they are connected. We hope to see this book widely used. (70 cents. American Book Company, Chicago and New York.)

NEW EDUCATION READERS—BOOK IV.

This book completes the New Education Readers and is intended for the use of pupils in the third year. It continues the application of the principles developed in the former books. Through a wide range of subjects, the pupils are introduced to good literature and led into right habits of thinking and reading. Lists of the more difficult words are given at the end of the book, where they will serve for drill work in enunciation, pronunciation, and spelling. The reading matter in the book is of a higher grade than is usual in third readers, owing to the extensive vocabulary developed by this new method, which enables the pupil to do in three years the work formerly requiring four. The book is handsomely illustrated, and bound in a very attractive cover. (45 cents. American Book Company, Chicago and New York.)

ROBINSON CRUSOE.

The first edition of Robinson Crusoe was published in the year 1719. No other story, except the life of Uncle Tom, has been more widely circulated among English-speaking people. This edition, which is one of "Heath's Home and School Classics," has an interesting introduction from the pen of Dr. Edward Everett Hale, in which he says that "the title page of the book in its original edition calls it 'The Life and Strange Surprising Adventures of Robinson Crusoe, of York, Mariner, who lived eight and twenty years all alone in an uninhabited island on the coast of America, near the mouth of the great River Oroonoke.'" How often the mistake is made of teaching boys and girls that Crusoe's island was Juan Fernandez.

This is such a beautiful edition of this popular story we may be pardoned for speaking in this review of the series of books known as "Heath's Home and School Classics." There are thirty-two volumes of complete works chosen from the world's best literature. These have been prepared with the needs of children ever in view. Even the weight of the volumes, the type and the length of the line have been so planned as not to fatigue the reader.

In his introduction to this edition of Crusoe, Dr. Hale says: "I should like to have those boys who read this preface say to their sisters that they had better read 'Robinson Crusoe'; say that a person who is thoroughly and well acquainted with 'Robinson Crusoe' is thoroughly and well acquainted with the best narrative which has ever been written in the English language." (60 cents. D. C. Heath & Company, Boston and Chicago.)

SPRINGTIME FLOWERS.

Mae Ruth Norcross is the author of these easy lessons in botany. This volume is designed as a beginning in the study of a science which, in later years, becomes both interesting and profitable, and the lessons have been prepared in as simple a form as possible. Only well-known flowers have been used for the illustrations. The story of the study of these plant forms and the structure as observed are described in the simple language of the child. (36 cents. Silver, Burdett & Co., New York and Chicago.)

THE JINGLE BOOK OF BIRDS.

This book of jingling bird verse with its 16 colored plates of beautiful and characteristic birds is certain to capture the children and to hold the attention and interest of the elders. The author, Mr. Edward Brayton Clark, is well known to bird lovers through his field sketches of bird life. Mr. Clark, in selecting the birds which illustrate his verse, was careful to choose only those whose names, plumage and characteristics are such as to lend themselves readily to the motive of the verse. The lines are not jingles merely, but jingles which have a well-rounded purpose and much of pith and point. The color scheme of the cover of *The Jingle Book of Birds* is strikingly beautiful. The younger ones, and the older ones, too, for that matter, will be delighted with this book for a Christmas gift. The author is intimately known to thousands of readers by the articles from his pen which have appeared several times a week on the editorial page of the *Record-Herald*. (50 cents. A. W. Mumford, Chicago.)

THE NEW BUSY BEE.

This book of songs, edited by J. F. Kinsey, is arranged for use in the schools of both city and country. It contains the elements of music in a concise form. There are songs for each season of the year, and songs that tell of birds, of flowers, and of brooks and dells. These are songs that will make the school-room brighter. (35 cents. A. W. Mumford, Chicago.)

THE STORY OF LITTLE NELL.

This is the latest addition to the series of Eclectic School Readings, so widely and favorably known to teachers. It comprises the ground-work and much the larger portion of "The Old Curiosity Shop," and is given in the present volume just as Dickens wrote it, but freed from the various episodes and other passages originally employed to introduce other characters. The story, thus abridged and confined solely to the relation of the pathetic adventures of its heroine, will, we are sure, appeal especially to young readers. They cannot fail to perceive its beauty and

its pathos, nor to admire the courage, the self-denial, and the simple goodness of Little Nell herself. We are glad to see such a story issued in a form suitable for reading in schools. (50 cents. American Book Company, Chicago and New York.)

WARD'S LETTER WRITING AND BUSINESS FORMS.—VERTICAL EDITION.

This series, consisting of four numbers, presents social and business letters and forms

of all kinds, in the vertical style of penmanship, with very complete directions and definitions to aid the pupil in reproducing similar forms without copy. He learns to do by doing, guided by directions at the head of the page, and assisted by his own powers of observation. The books seem to cover very completely the subjects treated, and to be admirably adapted for successful teaching in elementary schools. (Numbers I and II, 10 cents each; numbers III and IV, 15 cents each. American Book Company, Chicago and New York.)

Educational Articles in the November Magazines.

- "The Making of Yale College—A Bicentenary Sketch," Truman Bliss
.....*American Illustrated Methodist Magazine*
- "The Last Phase of the Philippine Rebellion and the Problems Resulting Therefrom,"
John H. Parker.....*American Monthly Review of Reviews*
- "Dr. D. K. Pearson, the Friend of the American Small College," George Perry Morris.
.....*American Monthly Review of Reviews*
- "Training of a Football Team," Allen Sangree.....*Ainslee's Magazine*
- "The Artistic Element in Tennyson," Caroline A. Watters.....*Book World*
- "The Literary Side of Our Presidents—Rutherford B. Hayes," John De Morgan,
.....*Book World*
- "A Man-of-Letters in the White House," Joseph B. Gilder.....*Critic*
- "City Government in Canada," S. Morley Wickett.....*Canadian Magazine*
- "The Education of a Child from Eleven to Eighteen," Edward Howard Griggs.
.....*Ladies' Home Journal*
- "Correct Speaking and Writing," Elizabeth A. Withey.....*Ladies' Home Journal*
- "The Child of Threes and Over," Elizabeth Robinson Scovil.....*Ladies' Home Journal*
- "Idealism in Contemporary French Painting—II," Camille Mauclair.....*Magazine of Art*
- "Impressionism—Two Conversations, Con and Pro. I—Con," Rev. Anthony C. Dean.
.....*Magazine of Art*
- "William McKinley," Frank Munsey.....*Munsey's Magazine*
- "A Brief Outline of McKinley's Career," R. H. Titherington.....*Munsey's Magazine*
- "The Reconstruction Period and its Political Outcome—I. Slavery and the War," Frederick Austin Ogg.....*Modern Culture*
- "Football Development in 1901," Walter Camp.....*Outing*
- "Where the World's Standards of Measurement Are Set," Ray Stannard Baker.
.....*Pearson's Magazine*
- "What I Saw in the Catacombs," Rev. H. Donald M. Spence, D.D.....*Quiver*
- "The Mission of a Teacher," Henry Mitchell McCracken.....*Success*
- "The Kind of Training Needed for Success in Business," C. C. Gaines.....*Success*
- "Marquis Ito, the Great Man of Japan," Frederick Palmer.....*Scribner's Magazine*
- "How Citizens are Made," Lewis P. Clover.....*The Junior Munsey*
- "The Small College and the Large," C. F. Thwing.....*The Forum*
- "The Political and Commercial Future of Asia," W. C. Jameson Reid.....*The Forum*
- "The Assassination of Kings and Presidents," J. M. Buckley, LL D.....*The Century*
- "Some Personal Characteristics of President McKinley," John D. Long.....*The Century*
- "Stories of Nature and Science," Alonzo Ford.....*Young People's Magazine*

THE UNIVERSITY LAW SCHOOL

OF ILLINOIS.

ROSWELL SHINN, LL.D., Dean.

52 DEARBORN STREET,
CHICAGO

Offers **unusual facilities** for the study of the science of the law at a **minimum cost** and equips students for the successful practice of the profession.

It has an **unexcelled faculty** of eminent practitioners **especially skilled** in the field of their chosen subjects, who seek not to obtain personal gain but to impart desired knowledge.

It is always open for the admission of students, and has preparatory and post-graduate courses.

Correspondence solicited.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled. The word marked according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—*E. E. McIntire, Superintendent of Schools.*

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN ✧ TEACHERS ✧ AGENCY.

The South and West offer better advantages to aspiring teachers than any other section. THE SOUTHWESTERN TEACHERS

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to

CLAUD J. BELL, Proprietor.

TOKOLOGY Complete Ladies' Guide

By ALICE B. STOCKHAM, M.D.

Prepaid cloth, \$2.25; Morocco, \$2.75. Sample pages free. 500,000 sold. Lizzie M. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of 'Tokology.' Always saves pain—often saves life."

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago

TRUE MANHOOD

A manual of
SEXUAL SCIENCE
for young men.

By E. R. Shepherd.

Gives knowledge that leads to purity in thought, word and act, revealing truths with a chaste hand. Endorsed by the Y. M. C. A. and prominent ministers and physicians everywhere.

Atchison Baptist: "It tells what many parents do not know, and what more are afraid to tell." Levant cloth, 322 pp., postpaid, \$1.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago.

GREAT BARGAINS IN MAGAZINE CLUBS.

\$13.00 worth for only \$6.00

By special arrangement we are able to offer the Greatest Clubbing Bargains of the Season. THE MAGAZINES WILL BE SENT TO ONE OR DIFFERENT ADDRESSES.

BIRDS AND NATURE, 1 year	\$1.50	} \$13.00 worth. SEND US ONLY \$6.00 FOR ALL FIVE.
REVIEW OF REVIEWS (new), 1 year	2.50	
CURRENT LITERATURE (new), 1 year	3.00	
NORTH AMERICAN REVIEW (new), 1 year	5.00	
REVIEW OF EDUCATION, 1 year	1.00	

In place of REVIEW OF REVIEWS you can have NEW ENGLAND MAGAZINE.
In place of NORTH AMERICAN REVIEW you can have LESLIE'S WEEKLY.

Twelve More Great Offers. (The Club Price Pays for a Yearly Subscription to Each Periodical.)

Regular Price.		Club Price
\$12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, Current Literature (new), Success	\$6.25
11.00	Birds and Nature, Review of Reviews (new), New England Magazine, Current Literature (new), Success	5.50
12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, New England Magazine, Success	6.25
12.50	Birds and Nature, Current Literature (new), Leslie's Weekly, New England Magazine, Success	6.25
6.00	Birds and Nature, Review of Reviews (new), Cosmopolitan, Success	4.00
6.50	Birds and Nature, New England Magazine, Success, Cosmopolitan	4.00
10.00	Birds and Nature, Leslie's Weekly, Review of Reviews (new), Success, Cosmopolitan	5.75
8.50	Birds and Nature, Leslie's Weekly, Success, Cosmopolitan, Leslie's Monthly	5.25
6.50	Birds and Nature, Leslie's Weekly, Success	4.25
5.50	Birds and Nature, Success, Cosmopolitan, Leslie's Monthly, Household	4.00
3.50	Birds and Nature, Success, Cosmopolitan	2.75
3.50	Birds and Nature, Success, Household	2.75

In place of Cosmopolitan and Leslie's Monthly in any of our offers we can send you Good Housekeeping, Designer, Ledger Monthly, Household, Pilgrim, American Mother, Recreation (new), Popular Science News (new), or Home Magazine of New York. If you are now a subscriber to Review of Reviews and wish to accept these liberal offers, you can add \$1.00 to the price of the combination. This will apply to Current Literature also.

Remember the Magazines will be sent to one or different addresses. The subscriptions may be either new or renewals, except those to Review of Reviews, Current Literature, North American Review, Recreation and Popular Science News, which must be new subscriptions.

Make Remittances and Address All Orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago.

THIS IS THE MOST GENEROUS OFFER EVER MADE BY AN EDUCATIONAL PAPER.

SCHOOL ROOM METHODS AND NATURE STUDY. Three Numbers. Each 25c.

Contents of Volume I. are given only in a general way. Those of 2 and 3 in detail. Each volume is profusely illustrated. Money refunded to anyone who is not satisfied.

CONTENTS OF NUMBER I.

Books helpful in Nature Study—Symposium on Nature Study—Pedagogic Aspects of Nature Study—Nature Study and the Teacher—The Outdoor Study of Geography—Plant Study—Seeds and Their Germination—The Study of Leaves—Flowers and Their Work.

The Study of Trees.

A Dozen Common Birds, Bird Study, Olive Thorne Miller.

Bird Day and Birds, John Burroughs; Our Common Insects—How to Study Their Life History and Habits (illustrations for this article and the one on Mammals furnished by Prof. Lugger, most of them from his own drawings).—Selections from Literature to Accompany Nature Lesson, Sarah L. Arnold.

CONTENTS OF NUMBER II.

LESSONS AND EXERCISES FOR SEASONS.

Suggestions for Christmas Program—Christmas Bells—December in the Primary Room—Christmas History and Customs—Legend of the Chrysanthemum—In the Lands of Ice and Snow—In Esquimaux Land—Valentine's Day—Lincoln Exercises—Hour With Washington—Patriotic Day Program—Arbor Day Exercises—Trees and Their Uses—Growth and Structure of Trees—Arbor Day Program—Memorial Day—Stars and Stripes—Flag Raising Exercise—Balch's Salute to the Flag—Flag Raising Days—Outline of Bird Study—Flag Day Exercise.

NATURE AND CORRELATED WORK.—An Ingenious Contrivance—Cabbage Butterfly—Some Common Butterflies—Course of Study (Sarah C. Brooks)—Gentians (Correlated Lesson)—Outline for Correlated Work—Bird Life in Winter—Reading Lesson (1st grade) The Woodpecker—Related Lessons on the Sun—Study of Leaves and Birds—Observation of Trees—Report of a Field Lesson.

GEOGRAPHY.—Study of a Brook Basin—A Field Lesson with Little Children—Mediterranean Cruise.

MISCELLANEOUS.—A Word to Country Teachers—Art in School—Trials and Beauties of Winter—Aeolian Harp—Learning School Songs.

POETRY.—God Bless Our Fatherland—Abraham Lincoln—The Nation's Sorrow—Washington—Hall Columbia—Birthday of Washington—God Save the Queen—Concord Hymn—Selection from Bryant—Twenty Miles Away—Ratisbon—John Henry Jones—Little Maid's Reply—Yankee Doodle—To Lincoln—Ode to Ethiopia—Patriot's Remembrance—Decoration Day—Starry Flag—Memory's Wreath—Our Country—Owners for the Brave—Rest in Peace—An Offering to the Soldier—The Deserted Plantation.

BIRDS AND INSECTS.—Cats' Claws, Who Has Counted Them—Jackdaw—Mrs. Wasp and Mrs. Bee—Crickets' Ball—How the Woodpecker Knows—Legend of the Birds—The Robins Sing in the Rain—Bob White—A Bird's Nest—Throstle—The Rabbit, The Lion, The Cat—The Tradesmen—Birds of Spring—The Jay—The Song of the Bee—The Butterfly—The Dead Pussy Cat.

FLOWERS AND PLANTS.—Gentian—Fringed Gentian—Milkweed Pod—Golden Rod—Seed Cradles—How the Leaves Came Down—Corn—October Woods—Little Aster Service—Chrysanthemums—Flowers in the Window Sill—Buttercups and Daisies—Pussy Willow—Pussy Willow—The Alder Catkin—Leaves and Flowers—The Little Plant—Daisies—How Marigolds Happened To Be—Lilies—Two Trains to Poppy Land—Old Fashioned Roses—Butterflies and Flowers—My Strawberry.

NATURE.—Raindrops—The Bonny Bicycle—A Bowl of Honey—River Song—Suppose—The Sunbeam—Butterfly and Thistle-Ball—Little Drops of Water—Long Ago—Talking in Their Sleep—The Wind—The Wind—Joy for the Sturdy Trees—Forty Years from Now—In the Swing—Which Tree is Best—Discontented—Maple Tree—Whispering Pine—Planting the Tree—Tree Party—The Oak—Wayside Inn—Horse Chestnut—Plant the Apple Tree—Then It's Spring—The Cottonwood Tree—Little Brook—Little Snowflakes—Little Things—Waterproof Folks—The Heart of a Tree—The Critic—Plum Tree Dancers.

EXERCISES AND POEMS FOR SEASONS.—Harvest Exercise—Autumn—Autumn Song—Autumn—November—Down to Sleep—Thanksgiving—A Sober Month—Harvest Hymn—Thanksgiving, The Reason Why, Dot's Thanksgiving, Praise God, Little Paul's Thanksgiving, All Things Beautiful, We Thank Thee, Signs of Thanksgiving, Thanksgiving—Little Jack Frost—Landing of the Pilgrims.

CHRISTMAS POETRY.—Yule Tide—Christmas Tree—God Rest Ye—Christmas Stockings—Santa Claus' Petition—Little Town of Bethlehem—Bird's Christmas—A Feel in Christmas—Air—Christmas Carol—Hang up the Children's Stockings—Address to Santa Claus—Old Santa Claus in His Den—Snow Fairies—The Two Brothers—What the Winter Brings—Christmas Bells—Christmas Hymn—Children's Friend—Charity—A Christmas Secret—Christmas Carol—In Bethlehem of Judea—Old Janus—Winter for Boys—Patriotic Exercise—Between Winter and Spring—Spring Cleaning—Return of Spring—When the Green Gets Back on the Trees—April Days—The Months of Folly—Decoration Day—Memorial Day for Wee Ones—Memorial Flowers—Praise June—Eddie's Thoughts—Thanksgiving—Snow—Jolly Old Winter—Sunshine—The Months.

MUSIC.—Norwegian National Hymn—Swedish National Hymn—Bruce's Address—Battle Prayer—The Marseillaise—Good Morning—Salute to the Flag—Scale Studies—We Have Been Wandering—A Spring Song—Till We Meet Again—We Thank Thee—Sunbeams—In Merry Autumn Time—Lullaby and Good-night—Fairlyland—The Swallow and the Sparrow—Christmas Song—Thanksgiving—Flowers That Bloom—Trees in Winter—Air Fairies—Little Gardener—Good Morning—Bring Forth the Flowers—Vapor Song—Swallows—East Wind—The Good Die Not—Lullaby—Parting Song.

CONTENTS OF NUMBER III.

JANUARY.—Solution and Crystallization; The Eskimo; Lesson on Coal and Mining—Dr. Burroughs' Method—Kindergarten in Primary Room—Only To-day—Happy New Year; Don't Give Up; Winter Song; Procession of the Months; The New Year; What the Coal Says—Bed in Summer; A Useful Gift; A Norse Lullaby (a song); The Little Fir Trees; A Vain Regret; To the New Year—Illustrated Poem—The Pine Tree—Music of the Pines—Mirlam (a story of a child).

FEBRUARY.—A Boy's Remonstrance (poem)—Hurrah for the Flag (poem)—Meeting Washington (an anecdote)—Mount Vernon (poem)—The Study of Washington—Tributes to Washington—Exercise for Washington's Birthday—A Lincoln Program—The Bravest Battle (poem)—Memory Gems—Decorations and Programs—Patriotism for the Little Ones—Noted Birthdays in February—Washington Memorial Exercise—Dialogues—The Little Maid's Reply—Saint Valentine's Day—February (poem)—Paper Making—Birthdays—Something About Lowell—Memory Gems from Lowell.

MARCH.—Classification in Country Schools—Memory Gem from Whittier—With the North Wind—Poetry, March; March; Mrs. Red Squirrel; Gaining Wings; Memory Gem from Clarence Urmay—Spring Lessons on Flowers—Program for One Week Spring Term—Poetry, Pussy Willow; One, Two, Three (a march song); Finding Fault; What Was It? Which One?

APRIL—Tree Planting (poem)—Arbor Day Thoughts—Arbor Day with Little Folks—An Arbor Day Collection—Arbor Day Exercises—The Oaks—The Lonely Pine Tree (story)—For Arbor Day (poetry), Planting Trees; The Tendril's Faith; An Arbor Day Tree; The Raindrops; Memory Gems from Smith and Cary; Planting a Cherry Tree—At Happy Easter Time—School Gardens—Escape at Bedtime (poem)—Memory Gems from Lowell.

MAY—A May Day Program—Program for Decoration Day—Quotations from Lowell—The Grand Advance (poem)—For Lincoln—Poetry, Lincoln's Favorite; Barbara Frietchie; The Flag; Great Men, Washington; George Washington—Patriotism—Flag Facts—Properties of Our Flag—The American Flag—Memory Gems—Poetry, Band of Mercy Hymn; A New Year; The Little Philanthropists—Correlated Lessons—Exercises in Sense Training—A Little Girl's Wonder (poem)—Memory Gem—An Afternoon with the Birds—Poetry, In the Orchard; My Strawberry; The Quickening of the Spring; Flower Song (music); The Maiden and the Blue Bird; May Day; In Apple Tree Town; "A million little diamonds"; Memory Gem—Analysis of Bird Gems—Why Some Birds Hop and Others Walk—An Eye to the Birds—The Coyote and the Woodpecker—Foreign Lands (poem)—A Queer Bird (poem)—My Serenade (poem).

SEPTEMBER—September—Our New Teacher—First Day in Primary Room—Days of the Week—Jean Ingelow—Your Own Geography—Review Days—God Give Us Men—"Ill fares the land"—Common School Examinations.

OCTOBER—A Letter to Mother Nature—The Autumn Jewel—A Study of Columbus—At the Sign of the Goldenrod—A Walk with a Naturalist—Grasshopper Music and Verse—Little Bird, Little Bird.

NOVEMBER—Thanksgiving (Illustrated)—Jack O'Lantern; A "Bird's-Eye" View—Harvest Is Come; Thanksgiving—Thanksgiving; Thanksgiving Letter; The Cricket Fiddler; Eugene Field; Bedtime; The Bill of Fare—November Lessons: Lesson on the Squirrel; Lessons on Nuts; Lesson on Indians; Oral Number Work—Oral Number Work—Patriotic Thanksgiving Exercise—A Strange Plant—A Thanksgiving Hymn; Smile a Little; Memory Gems—Kindergarten Occupations in the Primary Room—November memory gems—A Talk on the Seed—Literature in the Primary Room—Hints on Map Making.

DECEMBER—Christmas Tributes from the nations—An Eastern Legend; To Prevent a Mistake; Christmas Joy; Where? A Christmas Eve Thought; Santa Claus—Beautiful Snow; Good Night—A Christmas Turkey (story)—The Bird's Christmas Dinner (story)—The Little Christmas Tree (poem)—Imitation Japanese (poem)—The Stockings (poem)—Piccola (a story)—Memory gems—Whittier Memorial; For Primary Grades—For Grammar Grades—A Whittier Exercise—Wordsworth's Attitude Toward Children—Memory gems—Norse Mythology—Australian Poetry; My Jack Frost; "New occasions teach new duties".

MISCELLANEOUS—Catkins (poem)—Use of Chalk in the Schoolroom—March, April, May—The Little White One; The Starry Skies—October; November; December; January; February; March; April; May—Our Common Cereals: Wheat, Rye, Barley—Poetry: Don't Give Up; Robert of Lincoln; One, Two, Three; Springtime Summons; To the Dandelion

PRIMARY SCHOOL LEAFLETS.

Volume I. The Sun, Phaeton, The Snow.—Our Flag, The Boy Washington, The Man Washington, Joan of Arc.—Winds.—Spring, Pussy Willow, Rain, Dandelion, Little Brown Seed.—Little Dandelion, What the Flowers Wished, The Violet, Anemone.—The Frog, Snail, Crayfish.—September Aster, Goldenrod.—Milkweed, Thistle, Ants, October.—The Mayflower, New Land, Fruit, Thanksgiving Squirrel.—The Madonna, The Stars and the Child, The Christmas Story.

Volume II. The Snowflake Fairies, The Snow, A Trip to Cloudland, The Star.—Abraham Lincoln.—The Little Hiawatha.—Hiawatha's Canoe, The Cary Tree.—More About the Cary Tree, The Young Soldier, Take Care, The Drummer-Boy's Burial, The Red and White Roses.—Story of Little Caterpillar, Caterpillar and Robin Redbreast, Sleepy Little Caterpillar, Little Butterfly.—The Ants and the Grasshopper, The Pea Blossom.—The Three Bears, The Pea Blossom concluded.—The Lion and the Mouse, Why Chipmunks Have Stripes.—The Christmas Bells.

Volume 2½. Little Red Riding-Hood and picture.—Little Cedric, adapted from in Storyland (Illustrated).—King Aëolus and the Bag of Winds.—The Easter Hare.—A Little Morning-Glory Seed.—Clytie (Illustrated): The First Dandelion.

Volume III. The Seedlings, Thistle Song, Goldenrod, The Apple Tree, The Milkweed.—Going Away, Little Jack Frost, The Grapes, The Anxious Leaf.—What the Squirrel Said, The Flowers' Sleep, The Pumpkin, How Patty Gave Thanks.—What the Christmas Tree Said, The Stars, The Birds' Christmas.—The New Year, The Snowflakes, In Eskimo-Land.—Old Abe, The Snow Man.—March, Spring and Her Helpers, A Windy Story.—The Easter Lily, Tree Talk.—The Violet, The Thirtieth of May.—The Bees, The Dandelion's Birthday.

Volume IV. Quadrupeds, Called Fourpaws. It is a gem. It was edited by Nellie Walton Ford, author of "Nature's Byways." It treats, the Cat, Squirrel, the Fox, Lamb, Bear, Deer, Rabbit, Cow, Horse, Dog.

SPECIAL OFFER.

School Room Methods and Nature Study, 3 volumes, each 25c.....	\$.75
Primary School Leaflets, volumes 1, 2, 2½, 3 and 4.....	.45
Review of Education, 10 numbers.....	1.00
Total.....	\$2.25

All for \$1.50

**YOU CAN'T AFFORD TO MISS THIS
VERY SPECIAL OFFER.**

A. W. Mumford, Publisher,
203 MICHIGAN AVENUE, CHICAGO.

FIVE NEW BOOKS

THE TREE BOOK.

BY JULIA E. ROGERS, Cornell University.

Ready about Dec. 1st.

12mo. About 350 pages. Price, \$2. Advance orders, \$1.

This book will be illustrated with the pictures from our Typical Forest Trees in Photogravure and will be the most beautiful and practical book on trees ever published. It will also contain 200 drawings and other illustrations.

Miss Rogers was science teacher in the high schools of Des Moines and Cedar Rapids, Iowa, and as an institute lecturer in Nature Study attained a prominent place among the educators of the state. In 1900 she was one of Prof. Bailey's assistants in the Cornell Summer School of Nature Study, and the two years following were spent in postgraduate study in Cornell University.

BIRDS OF LAKESIDE AND PRAIRIE.

BY EDWARD B. CLARK.

16 Colored Plates.

Ready Nov. 1st.

We have had so many calls for a popular bird book to be illustrated with our color plates reduced in size that we have decided to publish one.

Price, \$1. Orders received in advance of publication, 75 cents.

A Boy's Trip to Yellowstone Park.

BY OLIN D. WHEELER.

100 Illustrations.

Ready Oct. 1st.

This is a charming story, adapted for supplementary reading in schools. No one is more capable than Mr. Wheeler to write a delightful story about this most interesting region. Geography teachers will welcome it.

Price, 75 cents. Orders received in advance of publication, 50 cents.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modelling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity with terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 5½x8½ in. 75 cents.

BIRDS OF SONG AND STORY.

An interesting Book on Familiar Birds, by JOSEPH GRINNELL, President of the Cooper Ornithological Club, of California.

Illustrated with 16 color pictures. Price \$1.00. Advance orders, 75 cents.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price : Two cents each assorted as desired; the 456 for only \$4.56; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

- | | | |
|----------------------------------|--------------------------------------|-------------------------------------|
| 1 Nonpareil. | 51 American Mockingbird. | 101 White-fronted Goose. |
| 2 Resplendent Trogon. | 52 Black-crowned Night Heron. | 102 Turastone. |
| 3 Mandarin Duck. | 53 Ring-billed Gull. | 103 Belted Piping Plover. |
| 4 Golden Pheasant. | 54 Logger-head Shrike. | 104 Wild Turkey. |
| 5 Australian Parrakeet. | 55 Baltimore Oriole. | 105 Cerulean Warbler. |
| 6 Cock of the Rock. | 56 Snowy Owl. | 106 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 57 Scarlet Tanager. | 107 European Kingfisher. |
| 8 Yellow-throated Toucan. | 58 Ruffed Grouse. | 108 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 59 Black and White Creeping Warbler. | 109 Lazuli Bunting. |
| 10 Golden Oriole. | 60 American Bald Eagle. | 110 Mountain Bluebird. |
| 11 American Blue Jay. | 61 Ring Plover. | 111 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 62 Mallard Duck. | 112 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 63 American Avocet. | 113 Green-winged Teal. |
| 14 Mexican Mot Mot. | 64 Canvas-back Duck. | 114 Black Grouse. |
| 15 King Parrot. | 65 Wood Duck. | 115 Flamingo. |
| 16 American Robin. | 66 Anhinga, or Snake Bird. | 116 Verdin. |
| 17 American Kingfisher. | 67 American Woodcock. | 117 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 68 White-winged Scoter. | 118 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 69 Snowy Heron, or Little Egret. | 119 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 70 Osprey. | 120 Crowned Pigeon. |
| 21 Bluebird. | 71 Sora Rail. | 121 Red-eyed Vireo. |
| 22 Barn Swallow. | 72 Kentucky Warbler. | 122 Fox Sparrow. |
| 23 Brown Thrasher. | 73 Red-breasted Merganser. | 123 Bob-white. |
| 24 Japan Pheasant. | 74 Yellow Legs. | 124 Passenger Pigeon. |
| 25 Bobolink. | 75 Skylark. | 125 Short-eared Owl. |
| 26 American Crow. | 76 Wilson's Phalarope. | 126 Rose Cockatoo. |
| 27 Flicker. | 77 Evening Grosbeak. | 127 Mountain Partridge. |
| 28 Black Tern. | 78 Turkey Vulture. | 128 Least Bittern. |
| 29 Meadow Lark. | 79 Gambel's Partridge. | 129 Bald Pate Duck. |
| 30 Great Horned Owl. | 80 Summer Yellow Bird. | 130 Purple Finch. |
| 31 Rose breasted Grosbeak. | 81 Hermit Thrush. | 131 Red-bellied Woodpecker. |
| 32 Canada Jay. | 82 Song Sparrow. | 132 Sawwhet Owl. |
| 33 Purple Gallinule. | 83 Yellow-billed Cuckoo. | 133 Black Swan. |
| 34 Smith's Longspur. | 84 Ruby-throated Hummingbird. | 134 Snowy Plover. |
| 35 American Red Crossbill. | 85 House Wren. | 135 Lesser Prairie Hen. |
| 36 California Woodpecker. | 86 Phoebe. | 136 Black Duck. |
| 37 Pied-billed Grebe. | 87 Ruby-crowned Kinglet. | 137 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 88 Mourning Dove. | 138 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 89 White-breasted Nuthatch. | 139 American Coot. |
| 40 Arizona Jay. | 90 Blackburnian Warbler. | 140 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 91 Gold Finch. | 141 American Sparrow Hawk. |
| 42 Orchard Oriole. | 92 Chimney Swift. | 142 Silver Pheasant. |
| 43 Marsh Hawk. | 93 Horned Lark. | 143 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 94 Yellow-bellied Sapsucker. | 144 Ovenbird. |
| 45 Black-capped Chickadee. | 95 Warbling Vireo. | 145 American Three-toed Woodpecker. |
| 46 Prothonotary Warbler. | 96 Wood Pewee. | 146 Bartramian Sandpiper. |
| 47 Indigo Bird. | 97 Snow Bunting. | 147 Nightingale. |
| 48 Night Hawk. | 98 Junco. | 148 Roseate Spoonbill. |
| 49 Wood Thrush. | 99 Kingbird. | 149 Dickcissel. |
| 50 Catbird. | 100 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opusum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cincaria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Blitern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Maple.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opusum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany—(Cows).
- 343 Harvesting in the Great North-west.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 { New England Aster.
- 347 { Late Purple Aster.
- 348 Wild Yellow or Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 { Fringed Gentian.
- 354 { Closed or Blind Gentian.
- 354 { Tall or Giant Sunflower.
- 355 { Black-eyed Susan or Oxyeye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowls.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-duck.
- 372 Red-breasted Sapsucker.
- 373 Promethean and Secropian Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinnamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Murrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel.
- 415 Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein.
- 423 Moth Mullein.
- 424 Medicinal Plant: Cocoa Fruit.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these:

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man—what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. **THE REVIEW OF EDUCATION** contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. **THE REVIEW OF EDUCATION** does not seek to compete with its contemporaries, but rather to supplement them all.

2. **N. E. JOURNAL OF EDUCATION;**
Weekly; \$2.50 a year.

Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monros, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.

3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**

Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.

4. **MODERN METHODS; \$1.00 a year.**
Our New Monthly.

The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.

5. **THE SCHOOL BULLETIN; \$1.00 a year.**

THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

The World Review

CHICAGO'S GREAT WEEKLY MAGAZINE

Published Every Saturday

Has the largest circulation of any periodical of its class published in the West. Appeals to a cultured class of readers. Its several departments are devoted to



M. VINCENT O'SHEA
Department of Education

**A Review of the Current Events of the World;
Editorial Discussions of Political, Economical and
Social Questions; Special Magazine Features;
Education; Literature and Art; Science and Life.**

Professor M. Vincent O'Shea of the University of Wisconsin conducts the department on Education and treats the social as well as the more professional phases of the subject in such a way as to be of interest to parents as well as to teachers. No other periodical so completely covers the range of the teacher's horizon. To read THE WORLD REVIEW weekly is to be thoroughly informed on all matters of current interest worth remembering.

The Best Family Magazine.—"It is the best paper of its kind that I have seen either east or west."

—*Professor G. L. Collie, Beloit College.*

Two volumes a year, each fully indexed. A complete encyclopedia of the times. Annual subscription \$2.50. Introductory rate to teachers \$2.00. Advertisers can secure special rates before the second volume closes.

THE WORLD REVIEW COMPANY FINE ARTS BUILDING
CHICAGO

Of BIRDS AND NATURE, \$1.50 a Year.

"BIRDS AND NATURE is a monthly magazine published by A. W. Mumford, of Chicago, who is the first publisher to make large use of the new and very beautiful process of color photography. Each number of the magazine contains eight full-page pictures of birds, animals, plants and scenes in nature in photographic colors, with two or three pages of descriptive letter press and also stories and sketches for nature lovers. It is an admirable publication and it deserves the success with which it is meeting. Its price is \$1.50 a year."
—*American Church Magazine.*



**THE SMITH PREMIER
OCCUPIES AN
IMPERISHABLE POSITION
IN THE BUSINESS WORLD.**

Unquestioned superior merit annually adds thousands of names to the long list of Smith Premier users, representing every line of trade and every profession. It is held in lasting regard at home and abroad.

ILLUSTRATED CATALOGUE FREE.

The Smith Premier Typewriter Co.

PRAISE FOR BIRDS AND NATURE (\$1.50)

I am delighted with every number of the magazine.
Cincinnati, O. Sept., 17, 1901.

Fred. V. Dearness.

I assure you, I thank you very much for your very kind and generous offer renewal BIRDS AND NATURE, which I cheerfully accept. I will enclose a P. O. O. for Five Dollars for the 52 back numbers of BIRDS AND NATURE, and for the numbers for the remainder of the year. After that I hope to become a subscriber to the very neat and deserved popular magazine BIRDS AND NATURE.

Vancouver, B. C., Oct. 1, 1901.

G. W. Jamieson,
Prin. Mt. Pleasant School.

I enclose a check for \$6; for back numbers BIRDS AND NATURE, \$5; for the coming year, \$1.
Tannersville, N. Y., Sept. 25, 1901.

Fisher Wood.

We prize the magazine BIRDS AND NATURE greatly and intend to continue our subscription indefinitely.

Mrs. Mary Grace Canfield.

Dover, Me., April 2, 1901.

Your magazine has given me the greatest pleasure ever since I took it. I look forward each month to its appearance and read it through from cover to cover.

Peabody, Mass., March 28, 1901.

David M. Cheney.

I received the different numbers of BIRDS AND NATURE sent me by you in very good shape, for which I truly thank you. I appreciate the little paper very much and shall do whatever lies in my power to increase its circulation and popularity.

G. W. Jamieson.

Vancouver, B. C., Oct. 14, 1901.

Please find enclosed Money Order of Five Dollars for the complete set of BIRDS AND NATURE from January, 1897, to December, 1901.

A. M. Drew.

El Dorado, Calif., Oct. 16, 1901.

I ran across a stray copy of your magazine for June, containing in addition to good reading and pictures, several offers of which I take the following if they still hold good: Offer No. 6, all the magazines to December, 1901, at \$5, and one year's subscription from then at \$1.50 and premium Birth of the American Flag, No. 4. I enclose M. O. for amount.

H. K. Bogert.

Mesa, Colo., Sept. 24, 1901.

The magazine is one of the finest I have ever seen of its kind.

Effie E. Littlefield.

No. Tisbury, Mass., Sept. 28, 1901.

HOLIDAY SONGS

AND EVERY-DAY SONGS AND GAMES,

By Emilie Poulsson.

Profusely illustrated by L. J. Bridgman.

This book has been long in preparation and is published at great expense, but we expect for it a warm welcome on account of the reputation of Miss Poulsson and a permanent popularity on account of its intrinsic merits.

Attractive cloth cover, price, \$2.00.

RAPHIA AND REED

WEAVING

By Elizabeth Sanborn Knapp.

The book will contain, also, a course in paper and cardboard construction and another course in free weaving with strips of cover paper of contrasting colors.

The raphia and reed work will be unique and of great help to all who are looking for something new and attractive for the lower grades.

Bound in cloth, price, 50 cents.

MILTON BRADLEY CO., Springfield, Mass.

NEW YORK,
11 East 16th St.

PHILADELPHIA,
1333 Arch St.

ATLANTA,
168 Peachtree St.

SAN FRANCISCO,
122 McAllister St.

The Old and New Way



We had heard so much of the **Beethoven Piano** which Mrs. Johnson sent for, that while down her way one day last week we stopped in and looked at it. We were paid for our trouble. It is certainly one of the most magnificent Pianos we have ever seen.

The case is made of that beautiful wood, French Burl Walnut, a marvel of carved and polished work. The interior construction is perfection itself, and the tone! Well, it was just about as sweet as anything we ever heard. Asked to guess the price, we said \$600.00 or \$700.00 and were very much surprised when Mrs. Johnson informed us that it was considerably under \$300.00. When requested for information as to how she ever obtained such a high grade piano at such a figure, Mrs. Johnson replied that she saw the advertisement of the **Beethoven Piano Company, Box No. 1316, Washington, N. J.**, in **REVIEW OF EDUCATION**, and sent for their catalogue, which is free. It was promptly sent and although she had no immediate intention of purchasing, yet the Company made her a special offer which was so good that she placed her order within a day or two.

Mrs. Johnson informs us that she never dealt with more polite and honest people than the above mentioned Company. The **Beethoven Piano Co.** are the pioneers in a new industry, that of manufacturing and selling pianos and organs direct from the factory to the home at a small profit over the cost to manufacture, thus saving their customers all outside profits. We advise all our readers to send and get a **Beethoven** catalogue whether they intend to purchase now or later on.

Good Literature For Almost Nothing

The Northern Pacific is noted among railways for its advertising matter. Its pamphlets, folders, booklets, etc., are tastefully gotten up and are valuable for what they contain. Here is a partial list of what **MR. CHAS. S. FEE, General Passenger Agent, St. Paul, Minn.**, will send out, carefully mailed, upon receipt of prices given. Any combination can be made, and money or express orders, silver or stamps will be accepted. This is a fine opportunity to obtain good descriptive reading matter for little or nothing.

WONDERLAND 1900—

An annual publication, beautifully illustrated in color and half tone. This number treats particularly of the history of the Northern Trademark, the Pacific's Custer Battlefield in Montana, and the Yellowstone Park.

Send
Six Cents.

MINIATURE WONDERLAND—

A neat and dainty publication containing a complete history of the Northern Pacific Trademark. The artistic covers of the Wonderland 1901 are used in miniature.

Send
Four Cents.

WILD FLOWERS FROM YELLOWSTONE—

A book of pressed wild flowers from Yellowstone Park, showing the real flowers in their natural colors. A dainty and beautiful souvenir—ten specimens of flowers and six full page illustrations of Park scenery.

Send
Fifty Cents.

YELLOWSTONE NATIONAL PARK—

A new 112-page book in strong, flexible covers, good paper, plain type, illustrated, pocket size, a compendium and descriptive of World's Wonderland.

Send
Twenty-five
Cents.

CLIMBING MOUNT RAINIER—

An illustrated pocket-size book, 72 pages, in strong flexible covers, printed on heavy paper, descriptive of an ascent of the highest peak in the United States—outside of Alaska—of a glacial nature.

Send
Twenty-five
Cents.

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—BIRDS AND NATURE one year and a complete set of these Trees for only \$2.00.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color,

The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

...Of...

Birds and Nature

\$1.50 a Year

BIRDS AND NATURE is a fine magazine, the children enjoy it very much.

E. L. Jenks.

Rockford, Ill., Oct. 10, 1901.

I have been a subscriber to BIRDS AND NATURE since it first was issued and like it better than ever.

Edward Jepsen.

Minneapolis, Minn.,

Oct. 29, 1901.

Enclosed find five dollars (\$5.00) for which please send me magazines from Jan., 1897 to Dec., 1901.

Miss Josie Chancellor.

Steinmetz, Mo., Oct. 29, 1901.

A. W. MUMFORD, Publisher

203 Michigan Ave.

Chicago




BEETHOVEN

You can get any high-grade BEETHOVEN

PIANO or ORGAN FREE

of any charge set up in your own home, no matter where you live. Write us to-day for full particulars and we will surprise you with the bargains we have to offer you.

WE DON'T WANT ANY MONEY

in advance. Our new catalogue will show you how to get a high-grade Piano or Organ at the right price and on the right terms.

ONE YEAR'S FREE TRIAL TO ALL

We ask no advance payment and sell on terms to suit any purchaser. NO AGENTS. NO STORES. NO MIDDLEMEN. Only one way from our big factory right into your own home at lower than WHOLESALE PRICES. Send to-day for our new and magnificent up-to-date SPECIAL BARGAIN CATALOGUE just out, of Pianos and Organs (mention which) ABSOLUTELY FREE.

BEETHOVEN PIANO and ORGAN CO.,

BOX 1316 WASHINGTON, NEW JERSEY.

No. 11316 After sending for Catalogue cut this advertisement out and keep this number where you can get at it. It may pay you handsomely.



Birds of Lakeside and Prairie, \$1.00

Nov. 11, 1901.

Enclosed find order for which please send me "Birds of Lakeside and Prairie," by Edward B. Clark.

Mansfield, Mo.

THOS. H. MUSICK.

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago

IT is very seldom we give a periodical a lengthy review, for it is always considered that it does not take so much space to review a magazine as it does a book—but if we forget ourselves in speaking of the Chicago Monthly "Birds and Nature," it will be that paper's fault.

Birds and Nature is a 48-page monthly devoted to nature and illustrated throughout by color photography, publishing in natural color pictures of birds, animals, insects, flowers, plants, etc., at the rate of eight pictures a month.

We have before us the June number, which contains a great many nice things. Of the birds described and illustrated in colors there are Bullock's Oriole, Sanderlings, the Great Northern Shrike, Brant's Cormorant. In the section devoted to animals we see the bison in colors. The three remaining color plates are devoted respectively to Agates, the Mullen, and the Cocoa fruit.

These plates are very accurate in their likeness to the natural colors, and it is seldom that one gets, at such a cost, so many fine pictures, and they are not chromos, either—this for the benefit of our friends who invest in that stock.

We wish Birds and Nature the future success it deserves, and sincerely hope that through it, as well as other nature periodicals, it may advance the cause of birds.—*Nebraska Farmer.*



BETWEEN



THROUGH FULLMAN SERVICE
BETWEEN CHICAGO AND



IF YOU ARE CONTEMPLATING A TRIP, ANY PORTION OF WHICH CAN BE MADE OVER THE CHICAGO & ALTON, IT WILL PAY YOU TO WRITE TO THE UNDERSIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

ONLY \$50.00 TO CALIFORNIA AND RETURN.

General Convention Episcopal Church, San Francisco, Cal., Oct. 2, 1901.

For this meeting the Chicago Great Western Railway will on Sept. 19 to 27, sell through excursion tickets to San Francisco, good to return Nov. 15, 1901, at the low rate of \$50.00 for the round trip. Rates via Portland, Ore., \$9.00 higher. Stop-overs allowed. For further information inquire of any Great Western Agent or J. P. Elmer, G. P. A., Chicago, Ill.

The
Pioneer
Limited.

Famous
Train
of
the
World.

CHICAGO—ST. PAUL—MINNEAPOLIS

VIA

The St. Paul Road.

(Chicago, Milwaukee & St. Paul Ry.)

**Equipment and Service
Unequaled.**

Time tables, maps and information
furnished on application to

**F. A. MILLER, General Passenger Agent,
Chicago, Ill.**

Big 4 Route

BEST LINE FROM THE

North, Northwest and West

TO

INDIANAPOLIS
CINCINNATI
LOUISVILLE

AND ALL POINTS

South and Southeast

For maps, rates, etc., address

W. J. LYNCH, G. P. & T. A.
CINCINNATI

Tours in the Rocky Mountains.

The Denver & Rio Grande and the Rio Grande Western offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the transcontinental traveler the grandest scenery. Two separate and distinct routes through the Rocky Mountains, all through tickets available via either. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman palace and tourist sleeping cars between Chicago, St. Louis, Denver, San Francisco and Los Angeles, and Denver and Portland. The best line to Utah, Idaho, Montana, Oregon and Washington via the "Ogden Gateway." Dining cars (service ala carte) on all through trains. Write S. K. Hooper, G. P. & T. A., Denver, Colorado for illustrated descriptive pamphlets.

Industrial Pictures.

Size 6x9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,
203 Michigan Ave. Chicago, Ill.

New Wabash Equipment.

THE Wabash Railroad has just received and placed in service on its lines running out of Chicago the following new equipment: Eight combination baggage and passenger coaches, thirty palace day coaches, ten reclining chair cars, three cafe cars and two dining cars. The majority of these new cars are seventy feet in length, and fitted with the latest style wide vestibules. They have six wheel trucks with steel wheels. The cars are finished in the finest selected Jago mahogany. The lighting is by Pintach gas with the exception of the cafe, dining and some of the chair cars, which are unusually well lighted by electricity, the fixtures being especially designed for these cars. The dining-cars will seat twenty-nine persons and have ample kitchen space. The cafe cars will seat eighteen persons in the cafe, and have a library and smoking-room in the observation end of the car which will seat fourteen persons. These cars also contain a private cafe with seating capacity for eight persons. These new cars represent the highest stage of the development of modern car building. Nothing has been omitted and no expense spared that would add to their luxurious elegance, or to the comfort and convenience of the patrons of the Wabash road.

No line is now better equipped than the WABASH for handling business to the Pan-American Exposition. Write for a copy of Pan-American folder containing a large colored map of the Exposition grounds and zinc etching of the principal buildings.

F. A. PALMER, Asst. Gen. Pass. Agt.,
CHICAGO, ILL.

NEW BOOKS

Spelling and Word-Building

By EUGENE BOUTON

Superintendent of Schools, Pittsfield, Mass.

Chas S Moore the book is original.
Words . . . Individuals. Pic-
7 Irving ter 02 6 the eye.
tures tell them . . .
Word-building exercises teach the
phonetic laws that control the spelling
of regular English words. First reader
words only. Over 250 illustrations.
(In Press.)

Standard Literature Series

No. 46. **Grandfather's Chair**, Hawthorne. A historical narrative of unusual interest for boys and girls. Numerous illustrations appropriate to the story.

No. 47. **The Courtship of Miles Standish and Other Poems**, Longfellow. Thirty-three complete poems. With biographical and critical introduction by Professor Wauchope. Illustrated.

No. 48. (July) will be **Some Famous Poets**. Poems of Goldsmith, Gray, Burns, Cowper, Wordsworth.

Gildersleeve-Lodge Latin Series

Selections from the Elegiac Poets, by Jessie B. Carter, Princeton University.

Cicero, De Officiis, Book I, by F. E. Rockwood, Bucknell University.

Cicero's Second Philippic, by E. G. Sihler, New York University.

Caesar's Gallic War, **Virgil's Aeneid**, and a new **Latin Exercise Book** will soon be added to the Preparatory Series.

Maury's Elementary Geography

Revised and enlarged. 120 pages. Study begins at pupil's home. The earth as a unit and as the home of man. Homes and peoples in color, full pages. Colored continental relief maps. The numerous illustrations from photographs. Each picture teaches a definite idea.

University Publishing Co.

NEW YORK BOSTON NEW ORLEANS

001 6 1213
Educ P 127.1

THE REVIEW OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. NO. 5.
WHOLE NUMBER 57.

CHICAGO, DECEMBER, 1901.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment	161
Five Evidences of an Education, Dr. Nicholas Murry Butler.....	166
The Place of American History in the High School Course, Herbert Eugene Bolton....	170
The Graded School—Its Strength and its Weakness, Superintendent Joseph Rosier	175
Psychology and Class Instruction, Prof. Edward Franklin Buchner.....	178
Method and Content in Education, George Alfred Brown.....	181
Teaching as a Business for Men.....	183
The Mexican Mot Mot (illustration).....	184
The Kingfisher (illustration).....	185
Plans of Geography Teaching in the Grades, Superintendent Spaulding.....	186
Industrial Geography—Industrial Development of New England, Prof Philip Emerson..	188
Relief Maps, Silvan Plumly.....	191
The Place the Subject of Forestry Should Occupy in High School Instruction, J. Gifford.	192
Concerning Nature.....	195
Things to See in December, Julia E. Rogers.....	196
Going to School in a Garden.....	197
Using the Dictionary.....	198
Book Reviews.....	198
Educational Articles in the December Magazines.....	200

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

New York Office, 1135 Broadway

Entered at Chicago Post Office as Second Class Matter.

Colored Supplement, Mexican Mot Mot and Kingfisher, with this number.

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCE.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$2.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33% per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

HOLIDAY BOOKS

The Jingle Book of Birds

By EDWARD B. CLARK.

16 Colored Plates. Price, 50c.

This book of jingling bird verse with its 16 colored plates of beautiful and characteristic birds will be certain to capture the children and to hold the attention and interest of the elders. The author is well known to bird lovers throughout the United States by his field sketches of bird life. Mr. Clark, in selecting the birds which are to illustrate his verse was careful to choose only those whose names, plumage and characteristics are such as to lend themselves readily to the motive of the verse. The lines are not jingles merely but jingles which have a well rounded purpose and much of pith and point. The color scheme of the cover of The Jingle Book of Birds will be strikingly beautiful. The younger ones, and the older ones, too, for that matter, will be delighted with this book for a Christmas gift. The author is intimately known to thousands of readers by the articles from his pen which have appeared several times a week on the editorial page of the *Record-Herald* for a long time past.

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago.

A B C Book of Birds

for children large or small

BY

MARY CATHERINE JUDD

with nonsense rhymes for little ones
and prosy sense for older ones.

26 colored plates. Price, \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

A. W. MUMFORD, Publisher,
303 Michigan Avenue, Chicago

The Psychology of Childhood

By **FREDERICK TRACY,**

Lecturer in Philosophy in the University of
Toronto.

With Introduction by **PRESIDENT G. STAN-
LEY HALL,** of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

—
This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

—
*Send for complete descriptive list of
Heath's Pedagogical Library, 37 volumes.*

D. C. HEATH & CO., Publishers

Boston

New York

Chicago

FOR 75 CENTS

We will send the following thr-
games to one address, prepaid. O-
any one game sent upon receipt of
price.

LITERATURE GAME, by A. W. Mumford.
500 questions and answers on English and
American Literature. 100 cards, 2¼ x 3
inches. Price, 25 cents.

GAME OF INDUSTRIES. 400 questions and
answers on the great industries of our
country. 100 cards, 2¼ x 3 inches. Price,
25 cents.

GAME OF BIRDS. Illustrations of popular
birds in colors, true to nature, on 52 finely
enameled cards, 2¼ x 3½ inches. Makes
the identification of our birds simple and
positive. Price, 35 cents.

These games are so interesting and
instructive you'll certainly enjoy
them. Just what you have been
wanting for the school and home.
Each game enclosed in case, with
full directions for playing. Address

A. W. MUMFORD, PUBLISHER.

203 Michigan Ave., Chicago.

A Few "Ifs" for Teachers...

IF you have to teach **MUSIC** in your grade,
IF you have to teach **DRAWING** in your grade,
IF you would like a set of model lessons in

**READING,
ARITHMETIC,
GEOGRAPHY, ETC.**

get **American Education**, in the current numbers of which is
an excellent and practical series of lessons on these subjects.

A SAMPLE COPY FREE.

NEW YORK EDUCATION COMPANY,

81 CHAPEL ST., ALBANY, N. Y.

Handsome Holiday Gifts

Note These Unusual Offerings

Birds of Lakeside and Prairie

By Edward B. Clark With Sixteen Illustrations in Color Price, \$1.00

This book contains sketches of bird life in the great middle west by one of the country's closest students of nature. The author takes his readers afield with him and puts them in close touch with the birds of lakeside, woodland and prairie.

Mr. Edward B. Clark, the local ornithologist and writer, has written "Birds of Lakeside and Prairie," which A. W. Mumford will publish soon. Mr. Clark's articles on bird topics have attracted bird lovers in widely scattered territory. The matter in the forthcoming volume was gleaned from numerous trips in the middle west, a territory left uncovered by writers on this subject. The book will contain sixteen colored illustrations.—*Chicago Tribune, Sept. 6, 1921.*

A. W. Mumford, Chicago: Please send me by express twenty-five copies of "Birds of Lakeside and Prairie."—*W. T. Smith, Bookseller, Genesee St., Utica, N. Y.*

The Jingle Book of Birds

By Edward B. Clark 16 Colored Plates Price, 60 Cents

This book is for both the children and the elders. The lines are not jingles merely but jingles which have a well rounded purpose and much of pith and point. The color scheme of the cover is strikingly beautiful. This book will make an appropriate Christmas present.

Beautiful Bird Calendar for 1902

This is the most strikingly beautiful calendar ever placed before the public. It is done in red and gray upon the most expensive paper. Upon each of the six sheets is a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months with which it is given. No more beautiful and useful holiday gift can be found. Order now. Price, 50 cents.

A. W. Mumford, Publisher 203 Michigan Ave., Chicago

The Song Budget Music Series.

\$1.50 PER DOZ., \$10 PER HUNDRED.

1. **The Song Budget.** Paper, small 4to, pp. 76, 15 cts. Leatherette, 25 cts.
2. **The Song Century.** Paper, small 4to, pp. 87, 15 cts. Leatherette, 25 cts.
3. **The Song Patriot.** Paper, small 4to, pp. 80, 15 cts. Leatherette, 25 cts.
4. **The Song Budget Music Series Combined,** containing all three of the above in one volume, with opening exercises for schools added. Cloth, small 4to, pp. 260. 50 cts.

The distinguishing features of the Song Budget Music Series, of which nearly half a million copies have been sold, are these:

- 1st. To give a good deal for the money.
- 2d. To give only the best music.
- 3d. To give music just as it was written.
- 4th. To give only songs that are strong.

The Sentence Method of Teaching Reading. By GEORGE L. FARNHAM. Cloth, 50 cts.

As the word method was a step above the alphabet method, so the sentence method is a step beyond the word method. "The unit of thought is the sentence," and if the child considers the words as units in learning to read, he must unlearn his habits of reading in order to read naturally. Mr. Farnham shows how much more easily children will learn to read, and how much better they will read, where this method is employed. The book is in general use all over the country; extensively used in Chicago the past year.

OLD STORIES RETOLD

With 59 Original Illustrations. By PAUL BINNER. Boards, 16mo, pp. 64. 25 cts. It is no longer a question whether children shall read fairy tales. The Graggrinds have been silenced, and it is admitted that something else besides "facts" shall enter into the education of children. So the question is now how these fairy tales may be most attractively presented to the child, and surely never before have they appeared in more enticing dress.

EDUCATIONAL GAMES

Historical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards, $2\frac{1}{4} \times 3\frac{1}{2}$ inches. 50 cts.

The cards contain 500 questions and answers, and afford a most interesting as well as profitable game for home and school.

Geographical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards $2\frac{1}{4} \times 3\frac{1}{2}$ inches, 50 cents. Similar to Historical Game.

THE GAME OF INDUSTRIES

Is an educational game consisting of 100 cards and 400 questions and answers on the great industries of our country. $2\frac{1}{4} \times 3$ inches, 25 cts.

LITERATURE GAME

By A. W. MUMFORD. 500 questions and answers on English and American Literature. 100 cards, $2\frac{1}{4} \times 3$ inches, 25 cts.

SPECIAL OFFER.

The Four Games to One Address Prepaid for \$1.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

Chicago.

Stories of Bird Life

BY

T. GILBERT PEARSON,

Professor of Biology, State Normal and Industrial College, Greensboro, N. C.

**Beautifully Illustrated by John L. Ridgway
and Miss Elsie Weatherby**

ONE may go far and not find a more sympathetic observer of birds than Mr. Pearson. He knows birds as few men have known them, and he loves them with a love that warms every word that he writes about them. Moreover, he is a lover, not a maudlin sentimentalist. There is not a trace of mawkishness in any line that he has written. In his effort to translate the thoughts and feelings of birds, he has not given them the thoughts and feelings of people, but he has tried to get down to the bird nature and to reveal what he really believes to be that nature. It is this, perhaps, which mainly distinguishes his book from so many studies of bird life. We have had enough of fables—of birds pictured as folks in feathers; what we want is the truth about the birds themselves.

As a well-known teacher who examined the advance sheets of the book remarked, it might well be called "a biography of certain birds by a sympathetic but truthful friend." Every story is of a robust, healthful type, and entertaining to a high degree. It is the story of an observer, not of a preacher.

12mo. Cloth. 326 pages. 80 illustrations. Price, 60 cents, postpaid.

The B. F. Johnson Publishing Company, Richmond, Va.

Beautiful Bird Calendar

→ **FOR 1902** ←

WE ARE ISSUING FOR IMMEDIATE DELIVERY the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Receive March 24.)

Telegram.—Can you take commercial department University of Wyoming, twelve hundred, begin April first? Telegraph.—*To Principal W. B. Carhart, Coeymans, N. Y., March 24.*

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart, March 25.*

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—*To President Smiley, March 25.*

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley, March 25.*

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—*To Mr. Carhart.*

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart, March 26.*

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—*To Mr. Carhart, March 26.*

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart, March 26.*

Telegram.—Carhart telegraphs he will start Thursday.—*To President Smiley, March 26.*

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart, March 27.*

Telegram.—Guy Railey, Cortland graduate, two years experience, will reach you today.—*To Mr. Carhart, March 27.*

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

Birds of Song and Story

By ELIZABETH and JOSEPH GRINNELL

16 Colored Plates. Price \$1.00.

These authors are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of outdoor study for many years but they have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends. The habits of every feathered friend of the dooryard and of the deep woods are known to Mr. and Mrs. Grinnell just as intimately as are the legends and the folklore of other ages touching the same bird. The title "Birds of Song and Story," is an eminently fitting one for the book, for in a few words it describes thoroughly its scope. There is a charm about the writings of both these authors that will appeal strongly to all lovers of good literature and especially strongly to all who love at once to read the printed page and the book of nature. Artistically, "Birds of Song and Story" will be made as nearly perfect as it is possible that any book may be.

A. W. MUMFORD, Publisher
203 Michigan Ave. - - - Chicago

NEW YORK

..ADOPTION

"I beg to advise you that a contract has been awarded to you by the Board of Education."

A. E. PALMER, Sec'y of Board,
New York.

The above reference is to the first three volumes of our BIRDS AND NATURE and also the 168 loose pictures illustrating them. These books and pictures are not only adopted for use in the school libraries of New York, but are extensively used in schools everywhere. The first three volumes adopted contain 168 exquisite pictures of birds in natural colors produced by color photography. The list price per volume in cloth is \$1.50, the special price, \$1.15. Loose pictures assorted as desired, 2 cents each, in sets of 168, \$1.75. Address

A. W. MUMFORD, Publisher
203 Michigan Ave., - - - Chicago
1135 BROADWAY, N. Y.

Greatest of all Tonics

Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—

Invigorates the Entire System.

OF BIRDS AND NATURE, \$1.50.

I enclose you herewith check for \$6.00 for which you will please send me BIRDS AND NATURE for the 6 years ending Jan. 1, 1903. Shall be glad to receive same at once, meaning of course, the back numbers. Yours very truly,

Portland, Me., Nov. 29, 1901.

C. O. BARROWS.

TOKOLOGY Complete Ladies' Guide

By ALICE B. STOCKHAM, M.D.

Prepaid cloth, \$2.25; Morocco, \$2.75. Sample pages free. 500,000 sold. Lizzie M. Armstrong writes: "If I knew I was to be the mother of innumerable children it would have no terrors for me, so great is my confidence in the science of 'Tokology.'" Always saves pain—often saves life.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago

TRUE MANHOOD

A manual of
SEXUAL SCIENCE
for young men.

By E. R. Shepherd.

Gives knowledge that leads to purity in thought, word and act, revealing truths with a chaste hand. Endorsed by the Y. M. C. A. and prominent ministers and physicians everywhere.

Atchison Baptist: "It tells what many parents do not know, and what more are afraid to tell." Levant cloth, 322 pp., postpaid, \$1.

STOCKHAM PUBLISHING CO., 56 Fifth Ave., Chicago.

LONG'S WOOD FOLK SERIES

By WILLIAM J. LONG

WAYS OF WOOD FOLK

Sq. 12mo. Cloth. 205 pages. Illustrated. For introduction, 50 cents.

WILDERNESS WAYS

Sq. 12mo. Cloth. 155 pages. Illustrated. For introduction, 45 cents.

SECRETS OF THE WOODS

Sq. 12 mo. Cloth. 184 pages. Illustrated. For introduction, 50 cents.

Animal Stories that are eminently true to life and yet have all the interest of imaginative tales.

These books are used in the schools of such cities as Denver, Colo., Duluth, Minn., Detroit, Mich., New York City, N. Y., Boston, Mass.

One or more books of the series has been adopted by the Ohio Teachers' Reading Circle, the Indiana Pupils' Reading Circle, the State Library Lists of Wisconsin, Iowa, Missouri, North and South Dakota.

Ginn & Company, Publishers

Boston New York Chicago San Francisco Atlanta Dallas Columbus London

The Review of Education.

VOL. VII.

CHICAGO, DECEMBER, 1901.

No. 5.

EDITORIAL COMMENT.

The first annual message of President Roosevelt has been given to Congress, and to the public. This document is evidently from the pen of a straightforward, earnest, practical and scholarly man. "It contains plain statements of facts and literally bristles with recommendations." It is a literary production well worthy the careful and thoughtful perusal of all educated people. All the subjects touched upon are treated in a clear and concise manner and will enlighten the reader in regard to the interests of our country.

The following paragraphs are of special interest to those connected with educational institutions. Regarding our policy toward the Indians in the schools established for their instruction, the President says:

In the schools the education should be elementary and largely industrial. The need of higher education among the Indians is limited. On the reservations care should be taken to try to suit the teaching to the needs of the particular Indian. There is no use in attempting to induce agriculture in a country suited only for cattle raising, where the Indian should be made a stock grower.

Regarding public libraries he makes this interesting statement:

Perhaps the most characteristic educational movement of the last fifty years is that which has created the modern public library and developed it into broad and active service. There are now over 5,000 public libraries in the United States, the product of this period. In addition to accumulating material, they are also striving by organization, by improvement in method and by co-operation to give greater efficiency to the material they hold, to make it more widely useful, and by avoidance of unnecessary duplication in process to reduce the cost of its administration.

In these efforts they naturally look for assistance to the federal library, which, though still the Library of Congress, and so entitled, is the one national library of the United States. Already the largest single collection of books on the western hemisphere, and certain to increase more rapidly than any other through purchase, exchange and the operation of the copyright law, this library has a unique opportunity to render to libraries of this country—to American scholarship—service of the highest importance. It is housed in a building which is the largest and most magnificent yet erected for library use.

Resources are now being provided which will develop the collection properly, equip it with the apparatus and service necessary to its effective use, render its bibliographic work widely available, and enable it to become not merely a center of research but the chief factor in great co-operative efforts for the diffusion of knowledge and the advancement of learning.

Without doubt mistakes are made in the curriculum and administration of our public schools. These faults cannot be remedied by sending our children to private schools. The latter have their place. Properly conducted, as most of them are, they are worthy of patronage. Their proper function, however, is not to replace the public school but to extend and round out its curriculum. President Roosevelt has set an example that it is well to follow. In an editorial, the *New York Times* says:

As might have been expected, President Roosevelt is not one of the too numerous Americans who are ever ready to extol the public schools as the foundations and guardians of our institutions and our liberties, but who, when it comes to the educating of their

own children, contradict their preaching by their practice, and send their offspring to private schools. At Oyster Bay the Roosevelt children gained such knowledge of books and life as their father thought they needed by going to the school attended by the neighboring children, rich and poor. When their father's vice-presidential term began, two of the Roosevelt boys entered the Force public school on Massachusetts avenue, in Washington, and now the President of the United States has enrolled his third son, Kermit, among the pupils of the same broadly hospitable institution. This is exactly as it ought to be—not particularly creditable, except by contrast with the course of those who by implication assert that the public schools are only for the children of the poor, and of those in lowly station, but plain, straightforward, thoroughgoing Americanism, and an example which cannot fail to disturb the smug self-satisfaction of parents whose course draws a line of cruelly invidious distinction among the children of the land.

faculties, in charge respectively of Columbia College, Barnard College, Teachers College, and the University Schools of Law, Medicine, Applied Science, Pure Science, Philosophy and Political Science. These faculties now number 385 officers of instruction, and these colleges and schools are now attended by 4,500 students. The faculties are now co-ordinated with each other in the University Council, in which all the educational activities and interests of the university are officially represented; and a complete reciprocity between all the parts of the institution and also with the Union Theological Seminary now prevails. The library of the university now contains 311,000 volumes, and the wealth of the corporation is now estimated at \$18,000,000, of which \$1,500,000 in round numbers represent the splendid generosity and munificence of Mr. Low himself. And, finally, the university is now located upon a site and possesses a physical equipment unsurpassed in beauty, comfort and completeness by those of any institution of learning in the world.

Mr. Seth Low, for over ten years the president of Columbia University, is now the mayor-elect of New York City. That he and the policy which he represents were popular, was demonstrated by the large majority polled in his favor. In the administration of the affairs of the university, Mr. Low was eminently successful. During his years of service, Columbia University had a wonderful growth and the influence of the executive ability of the president has spread throughout the educational world.

The Council of the University at a meeting held October 12, 1901, while expressing deep regret at the retirement of Mr. Low from the presidency, adopted a minute which contained the following statements of general interest:

When Mr. Low became the president of Columbia College, in the academic year 1889-90, the institution consisted of four faculties in charge respectively of the Schools of Arts, Mines, Law and Political Science. These faculties numbered 122 officers of instruction, and these schools were attended by 1,134 students. The faculties were connected with each other only through the president and trustees of the college, and the schools existed alongside of each other, without any principle or custom of reciprocity. The library of the college contained 92,000 volumes, and the wealth of the corporation was estimated at \$10,500,000. The faculties, schools, library, and entire equipment were crowded into the narrow and noisy quarters bordering on the New York Central Railway.

Today Columbia University consists of nine

The greater attention given and the efforts recently made or making in schools to arouse and cultivate the citizenship sense among children must be gratifying to every thoughtful person. A love for the institutions of one's country such that one is ready to live for their integrity and permanence is a sentiment of slow growth. It cannot safely be left to the high school period, nor be confined to formal lessons from a text. It means more than a knowledge of laws and ordinances and official duties and statutory limitations and privileges. A safe and self-respecting companionship with one's fellows in adult life is assured only when it grows out of a habit of taking others into account from the earliest years. There is recognized a tendency in current educational theory, if not established in practice, to fit the individual into the social group in which he is destined to participate; and that the schools should undertake this responsibility. Occasional schools see the conditions somewhat clearly, though measurable results must be yet many years in the future. How to select the material and how to order the sequence of exercises, and how to present them when chosen, and how to relate them to the accustomed work of the school must call for the clearest thinking and the most open-minded concern to find the truth in the matter, by all school

people. A dozen schools in the country are making contributions to the study. Teachers cannot afford to be indifferent to the movement. It promises much for the future—not to the children alone, but to the security of the State.—*Editorial in Education.*

The Ladies' Home Journal is publishing a most interesting and valuable series of articles on "The Education of a Child from Eleven to Eighteen." These articles are full of instructive and helpful thoughts. In one of them Mr. Edward Howard Griggs, the writer, says:

We have seen that in the period of transition from childhood to manhood occurs the true birth of personality, the awakening of the self-conscious life which isolates the individual from the surrounding world and yet gives a wholly new capacity for loving union with other lives. This twofold change is not all, however, of the wonderful development which comes at this epoch. It is also peculiarly the time of awakening to independent ideals of life which henceforth, changed for better or worse, are to be guiding stars in the life of the human being.

This does not mean that the young child is without ideals, but his are not in the same way consciously accepted aims of conduct; they are largely the result of contiguity and are echoes of what happens to be the personal world about him. This has appeared in all recent studies of children's ideals—one of the most fruitful fields, by the way, that have been opened up in modern child-study. The little child wants to be like papa, or the doctor who drives the horse, or the man who keeps the livery stable around the corner. We can all remember passing through a series of such ideals of life, each of which was absorbing for a time, but all of them impressed upon us by the accident of environment. As the child develops he reaches out into an ever-widening world, and as he comes into contact with the history and literature of great lives he chooses his ideals increasingly from the world-theater and less and less from the neighborhood in which he lives.

It is at this period of transition from childhood to manhood that there is an "awakening of conscious personality which brings the individual face to face with the problems of his own existence, and he begins to formulate his ideals sometimes even to intense reaction upon those of the world about him." Now when both the mental and physical being are changing rapidly "ideals come not only in larger measure but also in quite a new way."

Early in the month of November there was an important gathering of teachers at the University of Chicago. It was the fifteenth educational conference of the academies and high schools affiliated or co-operating with the University. One of the most important subjects under discussion was the relation between the schools and colleges athletic sports. A committee, to whom the question had been referred, reported in favor of a plan of control, formulated by Mr. E. G. Cooley, superintendent of the Chicago schools. In these schools the plan has proved effective and the committee recommended its adoption in the secondary schools of other cities. The salient features of Mr. Corley's system are as follows: (1) The requirement of a physician's certificate showing the physical condition of each pupil, who may wish to participate in the school athletics; (2) The requirement that the pupil shall present the written consent of his parents; (3) The requirement that the pupil shall maintain a high degree of scholarship while a member of any of the athletic teams of the schools.

The words of Bishop Spalding are pointed, full of vigor and always contain meat for careful thought. The following from his pen should constantly be in the mind of the teacher and of the parent. "The question of education is primarily a question of teachers; incidentally only, a question of methods. Information is indispensable, and the methods by which it may be best imparted must be known and employed by the teacher; but the end is a cultivated mind, opening to the light as flowers to the morning rays, a thirst for knowledge as the growing corn for rain and sunshine.

Dr. W. R. Scott, lecturer on political economy at St. Andrew's University, has published a very interesting outline of a commercial course at the universities. He contends that the universities, with-

out competing with the technical schools, can give a scientific course of education which shall not be too abstract for the wants of business men. He defines higher commercial education as "the training of those who are intended to fill responsible positions in business." A person who is to take part in the management of an undertaking requires a wide knowledge, best gained at a university, of many applied sciences, most of which are already taught, and all of which are within the limits of a university curriculum. Further he needs a training which shall be accurate as well as wide; for nowhere is a little knowledge more dangerous than in commerce. To this end he proposes the institution of a degree corresponding to the B.Sc., with two examinations. The first examination should be on three of the following subjects; Agriculture, chemistry, history, jurisprudence, political economy, political science. The final examination should be on a higher standard in similar subjects more specialized for business purposes, with the addition of commercial and international law, geology, engineering, public finance, and local government, banking, etc., three subjects again to be chosen. Dr. Scott suggests that a modern language should be required in the preliminary, and he points out that the student might with advantage, spend five months in the year at the university studying the theoretical side, and during the remainder of his time he could make progress in becoming familiar with practical details. This seems to be a very suggestive course and the outcome of it will be looked for with interest.—*Editorial in the School Review.*

The importance of legalizing and adopting the metric system of weights and measures in the United States is frequently demonstrated in our commercial dealings with the business houses of European nations. Consul Hill, in a recent report from Amsterdam, strongly recommends that the manufacturers of this country adopt this system in their foreign business and cites the following transac-

tion as an illustration supporting his suggestion: A Holland firm recently received a cable offer from a New York house for two thousand barrels of potatoes. The question at once arose as to how many American pounds there were in a barrel of potatoes. As a result a whole day was lost before an answer could be wired. Had it been possible to use the metric system every business man in Europe would have understood the offer immediately.

Two hundred years ago Elihu Yale planted a little acorn at New Haven, Conn.; today a giant oak stands where this seed was sown, its branches reaching out even to foreign lands, its foliage sheltering the best and noblest activities of this republic.

It would be simply impossible for any human mind to measure the power for advancement, for good, for liberty and for enlightenment that has spread itself throughout this country and the world since the founding of Yale University. Begun originally as a divinity school, it was not long before its faculty and trustees recognized that there was no better way to train men for the Christian life than to fit them for the practical things that enter into earnest business and professional pursuits and good government.

So Yale broadened. Ceaselessly she searched for truth; with untiring energy she forced her way into the homes of the land, into the counting room, the factory, the market and the shop; with unwavering determination she fought for the best in citizenship, in government, in learning and at the fireside. Thus she became in a peculiar manner typical of that American spirit which she has been such a large factor in fostering.

In the torchlight procession of students and alumni which recently wound through the streets of the Elm City the Japanese students carried a float bearing the inscription: "Japan for Yale and Yale for Japan." Nothing could more significantly show what this seat of learning has become in two centuries. First Yale was for America until America came

to stand for Yale. Then the more progressive countries of the far East caught the inspiration, and now the most advanced of them all takes up the old idea and in the sentiment "Yale for Japan" forecasts the still broader purpose of "Yale for the world."

Yale's practical achievements make her distinctively the most notable of all the American institutions of learning. She has sent out men to do, to conquer, to govern, and in these active and practical lines her graduates lead all the rest. The growth, strength, broadness and vigor of Old Eli are but an epitome of all these elements in the nation which delights to honor Yale today.—*The Chicago Post*.

During the celebration of the two hundredth anniversary of the founding of Yale University, in October, sixty-two honorary degrees were conferred. Of these fourteen were conferred for eminence in letters, twelve in science, ten in public service, nine in education, nine in theology, seven in law and one in art. The list of names of the persons selected, which includes President Roosevelt and Mayor Low, shows that all were eminently fitted, by some notable public work, to receive this high honor.

Mr. Cloudesley S. H. Brereton has been appointed on a special commission to inspect the secondary schools of Ireland. Brereton will be remembered as a visitor who attracted much attention at the Detroit meeting of the National Educational Association. The *Educational Review* has the following comment on this appointment:

Mr. Brereton brings to this work a mind at once candid and critical. He is conservative in all matters of administration, but exceedingly liberal in his views of education. He gives due weight to physical training and has helped materially in awakening an interest in this subject in France. His work on the educative value of sports was included by M. Buisson among the matters to be mastered by candidates for the Sorbonne diploma in pedagogy, and in 1898 a debate on the subject was held in the Sorbonne, under the auspices of M. Buisson, in which Mr. Brereton participated by special invitation.

Mr. Brereton holds that sports, as maintained in the English schools, develop in the individual qualities that make for moral power in the collective body. They foster personal initiative and independence, while at the same time they quicken the sense of solidarity.

Few realize how much there is to learn from nature in the month of December. This month as well as every other one in the year furnishes an abundant supply of material for the illustrative teaching of the natural sciences of our public schools. Miss Julia E. Rogers in an article, that we publish in this number, calls attention to the interesting things to be seen in December. Miss Rogers is a student of nature and soon there will be issued from her pen a useful book on trees.

The German Association for Advanced Education, which includes in its membership the prominent teachers of the Empire, believes that the American system of educational uniformity is much needed in Germany. To this end the association has petitioned Chancellor von Bulow to establish an imperial bureau similar in its function to the United States Bureau of Education.

During the present year the National Association of Collegiate Alumnae has added to its roll 1,400 members. The association now has a total membership of 4,000, representing twenty-two colleges. This would indicate that the number of women taking college courses has increased.

Statistics issued by the authorities of the University of Berlin show a large attendance of American students. This winter there are registered one hundred men and fifty-two women, representing thirty states and territories of the United States.

FIVE EVIDENCES OF AN EDUCATION.*

BY NICHOLAS MURRY BUTLER,

Columbia University.

A full analysis of the facts of life as they confront us today would show, I feel confident, that all knowledges and all influences are not on a single plane of indifference toward the human mind that would be educated. All parts of the spiritual machine are not mutually interchangeable. There are needs to be met and longings to be satisfied that will not accept any vicarious response to their demands. The scientific, the literary, the æsthetic, the institutional and the religious aspects of life and of civilization, while interdependent, are yet independent of each other, in the sense that no one of them can be reduced to a function of another or can be stated in terms of another. Therefore, each of these five aspects must, I think, be represented in some degree in every scheme of training which has education for its end. Nevertheless, this training when it arrives at education will not suffer itself to be measured and estimated quantitatively in terms either of science, of letters, of art, of institutions or of religion. It will have produced certain traits of intellect and of character which find expression in ways open to the observation of all men, and it is toward these traits or habits, not toward external and substantial acquisition or accomplishment, that one must turn to find the true and sure evidences of an education, as education is conceived today.

First among the evidences of an education I name correctness and precision in the use of the mother tongue. Important as this power is, and is admitted to be, it is a comparatively new thing in education. The modern European languages took on educational significance only when the decentralization of culture began at the close of the Middle Ages. So late as 1549 Jacques de Bellay supported the study of French with the very mild assertion that it is "not so poor a tongue as many think it." Mulcaster, writing a little later, found it necessary

to tell why his book on education was put in English rather than in Latin, and to defend the vernacular when he referred to its educational usefulness. Melancthon put German in a class with Greek and Hebrew and contrasted all three unfavorably with Latin. Indeed, it was not until the present German emperor plainly told the Berlin school conference of 1890 that a national basis was lacking in German education; that the foundation of the gymnasium course of study must be German; that the duty of the schoolmasters was to train the young to become Germans, not Greeks and Romans, and that the German language must be made the center around which all other subjects revolved, that a revision of the official school program was brought about that made place for the really serious study of the German language and literature. And today, where the influence of the English universities and of not a few American colleges is potent, the study of English is slight and insignificant indeed. The superstition that the best gate to English is through the Latin is anything but dead.

But for the great mass of the people the vernacular is not only the established medium of instruction, but fortunately also an important subject of study. A chief measure of educational accomplishment is the ease, the correctness and the precision with which one uses this instrument.

One's hold upon the English tongue is measured by his choice of words and by his use of idiom. The composite character of modern English offers a wide field for apt and happy choice of expression. The educated man, at home with his mother tongue, moves easily about in its Saxon, Romanic and Latin elements, and has gained by long experience and wide reading a knowledge of the mental incidence of words as well as of their artistic effect. He is hampered by no set formulas, but manifests in his speech, spoken

*Abstract of an address delivered before the Phi Beta Kappa Society of Vassar College in June, 1901.

and written, the characteristic powers and appreciation of his nature. The educated man is of necessity, therefore, a constant reader of the best written English. He reads not for conscious imitation, but for unconscious absorption and reflection. He knows the wide distinction between correct English on the one hand and pedantic, or as it is sometimes called, "elegant," English on the other. He is more likely to "go to bed" than to "retire," to "get up" than to "arise," to have "legs" rather than "limbs," to "dress" than to "clothe himself" and to "make a speech" rather than to "deliver an oration." He knows that "if you hear poor English and read poor English you will pretty surely speak poor English and write poor English," and governs himself accordingly. He realizes the power and place of idiom and its relation to grammar, and shows his skill by preserving a balance between the two in his style. He would follow with intelligent sympathy the scholarly discussions of idiom and of grammar by Professor Earle and would find therein the justification of much of his best practice. In short, in his use of his mother tongue he would give sure evidence of an education.

As a second evidence of an education I name those refined and gentle manners which are the expression of fixed habits of thought and of action. "Manners are behavior and good breeding," as Addison said, but they are more. It is not without significance that the Latin language has but a single word (*mores*) both for usages, habits, manners and for morals. Real manners, the manners of a truly educated man or woman, are an outward expression of intellectual and moral conviction. Sham manners are a veneer which falls away at the dampening touch of the first selfish suggestion. Manners have a moral significance and find their basis in that true and deepest self-respect which is built upon respect for others. An infallible test of character is to be found in one's manners toward those whom, for one reason or another, the world may deem his inferiors. A man's manners toward his equals or his superiors are shaped by too many motives to render their interpretation either easy or certain. Manners do not make the man, but man-

ners reveal the man. It is by the amount of respect, deference and courtesy shown to human personality as such that we judge whether one is on dress parade or whether he is so well trained, well educated and so habitually ethical in thought and action that he realizes his proper relation to his fellows and reveals his realization in his manners. As Kant insisted more than a century ago, a man exists as an end in himself and not merely as a means to be arbitrarily used by this or that will, and in all his actions, whether they concern himself alone or other rational beings, he must always be regarded as an end. True manners are based upon a recognition of this fact, and that is a poor education indeed which fails to inculcate the ethical principle and the manners that embody it.

As a third evidence of an education I name the power and habit of reflection. It is a frequent charge against us moderns, particularly against Americans, that we are losing the habit of reflection and the high qualities which depend upon it. We are told that this loss is a necessary result of our hurried and busy lives, of our diverse interests and of the annihilation of space and time by steam and electricity. The whole world and its happenings are brought to our very doors by the daily newspaper. Our attention leaps from Manila to Peking, from Peking to the Transvaal and from the Transvaal to Havana. We are torn by conflicting or unconnected emotions and our minds are occupied by ideas following each other with such rapidity that we fail to get a firm and deep hold of any one of the great facts that come into our lives. This is the charge which even sympathetic critics bring against us.

If it be true—and there are some counts in the indictment which it is difficult to deny—then one of the most precious evidences of an education is slipping from us and we must redouble our efforts to keep fast hold upon it. For an unexamined life, as Socrates unceasingly insisted, is not worth living. The life which asks no questions of itself, which traces events back to no causes and forward to no purposes, which raises no vital issues of principle and which seeks no interpretation of what passes within and without, is not a

human life at all; it is the life of an animal.

Renan was right when he held that the first condition for the development of the mind is that it shall have liberty, and liberty for the mind means freedom from the control of the unreasonable and freedom to choose the reasonable in accordance with principle. A body of principles is a necessary possession of the educated man. His development is always with reference to his principles, and proceeds by evolution, not revolution.

Philosophy is, of course, the great single study by which the power of reflection is developed until it becomes a habit, but there is a philosophic study of literature, of politics, of natural science, which makes for the same end. The question how, whose answer is science, and the question why, whose answer is philosophy, are the beginnings of reflection. A truly educated man asks both questions continually, and as a result is habituated to reflection.

As a fourth evidence of an education I name the power of growth. There is a type of mind which, when trained to a certain point, crystallizes, as it were, and refuses to move forward thereafter. This type of mind fails to give one of the essential evidences of an education. It has perhaps acquired much and promised much; but somehow or other the promise is not fulfilled. It is not dead, but in a trance. Only such functions are performed as serve to keep it where it is; there is no movement, no development, no new power or accomplishment. The impulse to continuous study and to that self-education which are the conditions of permanent intellectual growth is wanting. Education has so far failed of one of its chief purposes.

A human mind continuing to grow and to develop throughout a long life is a splendid and impressive sight. It was that characteristic in Mr. Gladstone which made his personality so attractive to young and ambitious men. They were fired by his zeal and inspired by his limitless intellectual energy. To have passed from being "the rising hope of the stern and unbending Tories" in 1838 to the unchallenged leadership of the anti-Tory party in Great Britain a generation later,

and to have continued to grow throughout an exceptionally long life, is no mean distinction; and it is an example of what, in less conspicuous ways, is the lot of every mind whose training is effective. Broadened views, widened sympathies, deepened insights, are the accompaniments of growth.

For this growth a many-sided interest is necessary, and this is why growth and intellectual and moral narrowness are eternally at war. There is much in our modern education which is uneducational because it makes growth difficult, if not impossible. Early specialization, with its attendant limited range both of information and of interest, is an enemy of growth. Turning from the distasteful before it is understood is an enemy of growth. Failure to see the relation of the subject of one's special interest to other subjects is an enemy of growth. The pretense of investigation and discovery before mastering existent knowledge is an enemy of growth. The habit of cynical indifference toward men and things and of aloofness from them, sometimes supposed to be peculiarly academic, is an enemy of growth. These, then, are all to be shunned while formal education is going on, if it is to carry with it the priceless gift of an impulse to continuous growth.

And as a fifth evidence of an education I name efficiency, the power to do. The time has long since gone by, if it ever was, when contemplation pure and simple, withdrawal from the world and its activities or intelligent incompetence was a defensible ideal of education. Today the truly educated man must be, in some sense, efficient. With brain, tongue or hand he must be able to express his knowledge and so leave the world other than he found it. Mr. James is simply summing up what physiology and psychology both teach when he exclaims: "No reception without reaction, no impression without correlative expression—this is the great maxim which the teacher ought never to forget. An impression which simply flows in at the pupil's eyes or ears and in no way modifies his active life is an impression gone to waste. It is physiologically incomplete. It leaves no fruits behind it in the way of capacity

acquired. Even as mere impression it fails to produce its proper effect upon the memory; for to remain fully among the acquisitions of the latter faculty it must be wrought into the whole cycle of our operations. Its motor consequences are what clinch it." This is just as true of knowledge in general as of impressions. Indefinite absorption without production is fatal both to character and to the highest intellectual power. Do something and be able to do it well; express what you know in some helpful and substantial form; produce and do not everlastingly feel only and revel in feelings—these are counsels which make for a real education and against that sham form of it which is easily recognized as well-informed capacity. Our colleges and universities abound in false notions, notions as unscientific as they are unphilosophical, of the supposed value of knowledge, information, for its own sake. It has none. The date of the discovery of America is in itself as meaningless as the date of the birth of the youngest blade of grass in the neighboring field; it means something because it is part of a larger knowledge-whole, because it has relations, applications, uses; and for the student who sees none of these and knows none of them America was discovered in 1249 quite as much as it was in 1492.

High efficiency is primarily an intellectual affair, and only *longo intervallo* does it take on anything approaching a mechanical form. Its mechanical form is always wholly subordinate to its springs in the intellect. It is the outgrowth of an established and habitual

relationship between intellect and will, by means of which knowledge is constantly made power. For knowledge is not power, Bacon to the contrary notwithstanding, unless it is made so, and it can be made so only by him who possesses the knowledge. The habit of making knowledge power is efficiency. Without it education is incomplete.

These five characteristics, then, I offer as evidence of an education—correctness and precision in the use of the mother-tongue; refined and gentle manners, which are the expression of fixed habits of thought and action; the power and habit of reflection; the power of growth and efficiency, or the power to do. On this plane the physicist may meet with the philologist and the naturalist with the philosopher, and each recognize the fact that his fellow is an educated man, tho the range of their information is widely different and the centers of their highest interests are far apart. They are knit together in a brotherhood by the close tie of those traits which have sprung out of the reaction of their minds and wills upon that which has fed them and brought them strength. Without these traits men are not truly educated and their erudition, however vast, is of no avail; it furnishes a museum, not a developed human being.

It is these habits, of necessity made by ourselves alone, begun in the days of school and college, and strengthened with maturer years and broader experience, that serve to show to ourselves and to others that we have discovered the secret of gaining an education.

THE PLACE OF AMERICAN HISTORY IN THE HIGH-SCHOOL COURSE.¹

HERBERT EUGENE BOLTON,
State Normal School, Milwaukee, Wisconsin.

A comprehensive treatment of the subject of American history in the high school involves a discussion of at least four practical questions: (1) In which year of the high-school course can American history most profitably be given? (2) How much time, all things considered, should be devoted to it? (3) What should be the scope and substance of the course? (4) How can it best be presented? Being impressed with the importance of the first question and knowing the varying practices in regard to it, I shall devote my attention chiefly to this one.

It is believed that these inquiries properly stand in the order here given. The third one, dealing with the substance of the course, and the fourth, relating to method, cannot most intelligently be discussed, much less "settled," if indeed any settlement is possible or even desirable, until it has been determined when the work is to be given and how much time is to be devoted to it; for, obviously, if American history is to be given in the first year to immature students fresh from the grammar school, the course cannot have the same scope and content as if given in the fourth year to students who have added three years of age and maturity since leaving the eighth grade. Neither, for similar reasons, can the course be given by the same methods; for, though fundamentally all methods of teaching history may properly be the same, yet in externals at least they must differ greatly to be adapted to students as widely separated in age and capacity as are first year and fourth year high-school pupils. Dr. John Dewey says that method in its last analysis is "reducible to the question of the order of development of the child's powers and interests. The law of presenting and treating material is the law implicit in the child's own nature." There seems to be little

ground for controverting this opinion, and its application here is direct. A pupil who has but recently left the grammar school at twelve years of age is immature. Imagination and memory for concrete facts, to be sure, are about at their zenith, but the powers of critical comparison and abstract reasoning are comparatively undeveloped. He is in the acquisitive stage, with more interest in the dramatic forms of fact and episode than in their true historical meaning. But three years of growth make of him a very different unit of mentality. His interests, powers, and habits of thought are now on a higher plane; they must be appealed to by different means, and in turn they lead to different ends. Methods and scope, in other words, in American history, as in any other subject, are conditioned by its place in the course.

If, then, the matter of the place in the course claims priority, and upon it there is not already some degree of uniformity in practice in high schools, it clearly seems to demand full and careful discussion. I believe it has important claims to priority, for the reasons above suggested; and facts show that upon it there is the widest possible variance in practice.

In response to ninety circulars sent out to accredited high schools of Wisconsin, sixty-seven replies were received in time for use in preparing this paper. One question asked was: "In what year of the course is American history given?" The returns show that the time ranges from the first to the fourth year—one school giving it in the first, forty-one in the second, twelve in the third, seven in the fourth, and five in the third and fourth, while one gives no American history at all beyond the grammar department. Taking these results to be representative, as I think they are, the showing is that somewhat less than two-thirds

(1) A paper read before the Interscholastic History Conference, at Madison, Wis., June 1, 1901. The general discussion was on the whole question of "American History in the High School."

(2) Quoted by Professor J. I. Jegg, in the *Journal of Adolescence*, Vol. I, No. 5, p. 180.

of the accredited schools in Wisconsin give the American history course in the second year, about one-fifth in the third year, one-tenth in the fourth, and nearly as many in the third and fourth.

While in a general way the larger schools put the American history latest, yet the above division does not appear to follow any clear classification of the schools on the basis of size, course, instructional force, nor other visible conditions. For in one list we find towns large and small,¹ like Arcadia and Janesville, Durand and Fond du Lac, Clintonville and Stevens Point, Augusta and Merrill. In another list stand Mayville and Sheboygan. In the same list we find schools accredited for every course the university offers, and others that are accredited for but the agricultural and English courses. A school employing one assistant to the principal stands beside another employing nine. One in which history is taught by a normal graduate who may not have studied American history since leaving the high school, stands beside one in which the subject is taught by a man who first graduated from a normal school, then entered the University of Wisconsin where he took the civic-historical course, and finally took two years of graduate work in history. Thus the basis of division according to practice is extremely obscure.

Outside of Wisconsin there is as little unity of practice as within. The Report of the Committee of Seven shows that about one-half of the schools of the country at large put American history late in the course, after general or European history; while the other half put it early in the curriculum, before European. Their statement of conditions is as follows:

(1) About one-third of the schools follow the chronological method, taking up in succession ancient history, general history, and modern history in some form, usually English, or American, or both; that is they use general history as a bridge between ancient times and our modern nations. (2) A much smaller number of schools, perhaps a seventh of the whole, prefer the order: general, an-

cient and modern; that is, first of all a survey of the whole field and then more detailed study, first of the ancient period, then of the modern. This method is apparently less common in New England than in the West. (3) The third method begins with American, or sometimes with English history, and then takes general history, bringing in ancient history last. About one-fifth of the schools reporting use this system, which is least common in the middle states, and which would seem to be devised to bring ancient history into a place convenient for college examinations. (4) A fourth method, which prevails in more than a quarter of the schools, is that of beginning with American, following with ancient history and ending with a general course; that is, they proceed from the particular to the general.

The lines of classification are dim here also. In short, there seems to be wide variations of practice in the matter everywhere, based on no visible differences in the condition of the different schools.

If, then, we are to discuss the scope and the method of presenting American history in the high school, we must either adapt our discussion to a shifting and indefinite basis or else come to some sort of a conclusion as to the time when the course can be most profitably given, and then, from this as a starting point consider the other questions.

I shall begin my contribution by a statement of my own conviction, namely, that American history in the high school should follow European history if any is given, and in any case should be as late in the course as possible, preferably in the fourth year, assuming no increase in the average amount of time devoted to history and no change from the present custom of five exercises per week, which, if practicable, would offer some advantages. I shall support my position by little that is new, but shall to a considerable extent restate arguments that have been given or suggested before in substance if not in form. If the arguments are tenable or the conclusion an accepted commonplace, we are justified in going over the ground with the hope

(1) The population of these places according to the last census is, given in order, 1273, 13,185; 1458, 15,110; 1256, 8637; 1815, 22966. *Census Bulletin* No. 54, February 7, 1901.

that reiteration may help to bring practice into correspondence with opinion. If they are not tenable they are presented for criticism and correction.

The time when American history is to be given in the high school is conditioned to a large extent by the other history work the pupil has had, or is to get in the high-school course. The facts are that all students get more or less American history before they reach the high school. Most elementary schools give American biography extensively through the grades, while in the grammar department they give from eighteen to thirty-six weeks of regular American history with a text-book. These facts, as the Report of the Committee of Seven (p. 38) suggests, satisfy the demand made by some that in teaching history we should begin with the familiar and near and proceed to the new and remote. But far more important, they furnish a positive argument for putting American history late in the high-school course whether American history alone is to be studied there, or European history is to be studied also.

1. Let us suppose that American history only is to be given. If this is given for the last time in the early years of the course the student must pursue it with little advance of mental strength since last he studied it; and as substance and method are both conditioned by the learner's mind, the course must be to a large degree similar in breadth, content, and method to the work done in the grammar school. It becomes essentially a review with the purpose of a review left out, a process which has not the highest educational value. If, then, only American history is to be included in the high school, in proportion as the final course comes late in the curriculum, in that degree will the student be able to bring to it greater maturity and new powers; developed reason and judgment supplementing memory, interest in facts for their content supplanting that for their dramatic form, power to generalize enhancing and raising the plane of interest in particulars; in that degree will the work become a *new view* rather than a *review* in the ordinary sense; and to that extent may the course consist of new

and richer materials selected from wider sources, and worked into higher forms of thought product by more complex processes of study. Better, I should say, shift some other fourth year study, that offers entirely new interests and is to be taken but once, back to the second year, and put American history in its place, than to go over American history earlier than the third year. Better yet, if only one course is to come in the high school, and this must come in the second year, strengthen the grammar-school course and make that in the high school European rather than American history. Indeed, if only one year's history work is to be done in the high school, I think, since considerable American history work has been already done, that no matter in what year it is put, the purposes of culture and general intelligence may possibly be better served by making it European history, or by combining English and American history according to the suggestions of the Report of the Committee of Seven on page 43. But in any case, if only American history be given in the high school and it is all to be given in one year, this final view should come late in the course if for no other reason than to admit of a lapse of time for mental growth after the grammar-school work, in order that the highest total good may be gained.

2. The case is even stronger when we start with the other assumption, that both European and American history be given in the high school course. This assumption corresponds with the facts in the large majority of cases. Most high schools of good standing in every state give in addition to the American history, a year or more of non-American history, under the heads of general; ancient and English; or ancient, mediaeval and modern history. That this should precede American history seems unquestionable, if alone on the grounds of chronological and logical sequence. And no purely psychological grounds the argument is even stronger. Apperceptively considered, a knowledge of American history must be insufficient unless based on some knowledge of the world's history. American history did not begin with John Smith nor with Christopher Columbus.

This the student must not only know in the sense of having read or heard it so stated, but he must realize it by having come in touch with the history of other nations that contributed to the making of America. He must see the fundamental institutions of America in their relation to the history of mankind. In the words of one of the masters' "the political history of the American people can be rightly understood only when it is studied in connection with that general process of evolution which has been going on from the earliest times, and of which it is itself one of the most important and remarkable phases. * * * As the town meetings of New England are lineally descended from the village assemblies of the Aryans; as our huge federal union was long ago foreshadowed in the little leagues of Greek cities, and Swiss cantons; so the great political problem which we are * * * solving, is the very same problem upon which all civilized peoples have been working ever since civilization began. * * * When thus considered our American history acquires added dignity and interest. When viewed in this light, moreover, not only does American history become especially interesting to Englishmen, but English history [and we may add world history] is clothed with fresh interest for Americans." In short, American development is the crowning work of a great part of human development. And in order that this may be in any sense realized, American history should be the culmination of any history course in American schools.

3. There is another consideration that is of no little weight. It is that the most intensive history course given should be the last, and that American history forms the best basis for such advanced forms of historical study as are possible with high school classes.

Advanced history work must be done late in the course because of its difficulty. No study in the curriculum requires a higher order of powers than does a study of history by methods calculated to derive from it its true content, an introduction to which should in this day be the privilege of the student before he leaves the "people's college." To such work there

must be brought power to assimilate, without distraction, reading far wider than the text. There must be training in the use of books, in patient search for facts, discrimination in their selection, and judgment in their classification and interpretation. All this is necessary to make even a beginning in truest historical study; and all this demands a maturity that is not usually attained before the fourth high school year.

As a basis for such work in American schools, American history furnishes materials more accessible, more abundant, and more intelligible than does English or other European history. I found, for example, through my questionnaire, that two-thirds of the accredited high school libraries in Wisconsin contain full or nearly complete sets of the American Commonwealth series and the American Statesmen series. These alone are a rich collection on American biography and local history. Few if any of the libraries have parallel sets equally useful and extensive on as limited a field of European history. Indeed, none such are available to ordinary high schools. And even if they were possessed, they would be found less suitable for the purposes. To use detailed material, even secondary, for historical purposes, one needs a certain apperceptive background, gained through life experience, to give orientation into the life of the country studied. This the student has of American life, but seldom of European life at the high school age. And when it comes to original sources, those for Europe in the first place are not accessible to high schools in abundance; and for any but recent times they are to a large extent unintelligible to the average high school student except under the most careful guidance. American history materials, therefore, are more plentiful, accessible, and usable, and therefore more suitable for such intensive work as high school students may have time to do. For this reason the American history course should be given at a time when the student is best able to do advanced work, which is not till late in the course.

It may be added in this connection that, other things being equal, it is perhaps less essential in preparation for

American citizenship, that a minuter knowledge of European than of American history be possessed.

4. Opinion is on the side of this position. This is the recommendation of the Committee of Seven who speak with authority. In my inquiries in this state I found that many who are giving American history in the second or even the third year believe it should be given later. Of the forty-one schools in which it is studied in the second year, only eighteen of the principals are satisfied with its place. Nineteen express a positive opinion that it should be placed later; three are undecided; and one gives no answer to this question. Of the sixty-six schools giving American history, forty-four principals, just two-thirds, positively think that it should be later than the second year. Of these, fifteen voted for the fourth year, fifteen for the third or fourth, and fourteen for the third. It is important to note in this connection that some of these men are principals whose interests are scientific or classical. Others are devotees of European rather than American history. All have the interests of the whole curriculum at heart. This illustrates a strong feeling in Wisconsin in favor of the position taken. Of thought elsewhere, the oft quoted Committee of Seven reports "an investigation of existing conditions leads us to believe that there is a strong tendency to place American history in the last year of the course."

To summarize the considerations thus far:

The place where American history is to appear in the course claims priority for discussion because other questions hinge upon it to a large degree, because there seems to be a baseless variation in practice, and because the dominant practice seems to be contrary to the best teachings and opinions.

It is believed that American history should come after European history if any is given, and in any case late in the course, preferably the fourth year, because, first, American history is extensively studied below the high school; second, to take it again and for the last time in the early years of the course would not be so profitable in total re-

sults as if given later; third, when European history is to be given, the laws of chronological and logical sequence and the psychology of apperception dictate that it should precede American history; fourth, American history furnishes a better basis than European for such intensive history work as may be given, which should come late in the course because of the high order of powers it involves; fifth, opinion here and elsewhere, not by any means confined to American history specialists, favors putting the American history as late in the course as possible.

In conclusion, the hopeful consideration to anyone who takes this position is that a large part of what is asked can be gained without colliding with science, English, Latin, or with any other interest. Most of the better schools give both European and American history. Such have only to change the order of the two to put American history on a much higher plane than it at present occupies. All that has gone before has been based on the assumption that only the present amount of time be devoted to history. What would seem a strong presumption in favor of both plenty of time for history and also for a choice place for it in the course is the fact that a dominant current of thought is today along historical and sociological channels. The historical method of inquiry pervades every other subject. Interest in history is becoming widespread, and that in our own country's history especially so. This is evidenced by the fact that American history has a much better place in the school curriculum than it had a decade ago. Indeed, this interest has been forced upon us by the nature of our current problems which lie so largely in civic, economic and sociologic lines. It is being recognized that fitness to cope with these problems can come only to a conservative, historical-minded and enlightened public, who not only can see need of reform, but who also understand the process and laws of institutional growth. It is being recognized that one of the most practical and useful forms of equipment that can be given a maturing person just ready to enter into the duties of active citizenship is a knowledge of how our American in-

stitutions came to be, as a clue to knowing whither they are tending. It is recognized that this can come only with an intelligent and considerable study of American history. It is not too much

to hope that this recognition will be reflected in the school course both in the amount and the disposition of the time devoted to this subject.—*The School Review*.

THE GRADED SCHOOL—ITS STRENGTH AND ITS WEAKNESS.*

SUPERINTENDENT JOSEPH ROSIER,
Fairmount, West Virginia.

For some years past there has been much discussion in some circles as to the comparative merit of the work done in the town or city graded school and of that done in the common ungraded country school. Leaders in educational thought, whose methods are mostly destructive, with strong denunciation, have assailed the evils of the graded school, and, that their criticisms might appear more pungent, they have pointed with pride and assurance to the superior results that have been attained in the rural school with its freedom from system and uniformity and its license to individual effort. These declarations have been made with such confidence that the friends and supporters of graded school systems, conscious of the weaknesses that prevented the full fruition of their ideas, have been constrained to assume an attitude of apology or to embark upon a sea of educational experiment that has added dizziness to the existing feeling of weakness.

It is my purpose to show that those who have been so fluent in their descriptions of the advantages to be enjoyed in the ungraded country school and whose condemnation of the evils prevailing in graded school systems has been so broad and so persistent, have based their arguments upon false premises. The efficiency of a school system must be judged upon the basis of the greatest amount of training to the greatest number of pupils. It is true that the ungraded school, surrounded by the freedom of country life and in close touch with the world of

nature, affords a large measure of opportunity for personal effort and individual growth. Many men of great power and influence in affairs today had their souls stirred to higher things for the first time under the guiding hand of an inspiring teacher in a rude country schoolhouse. But the success of a school cannot be estimated by what the exceptional boy or girl gets from his surroundings and the instruction that is placed within his reach. What the school does for the average boy and girl must be our standard for fixing the value of the work done by any system of education. From this standpoint those who claim superiority for the ungraded school must admit that the results do not substantiate the assertions made.

With all the weaknesses which have been pointed out by the educational critics the fact still remains that all the movements of progress in education have had their inception in the graded school systems of the country. Uniformity and system in educational work may be attended by a train of evils, but the evils, if there be such, are the results of bad administration and not of any inherent fault. The great strength of the graded school is due to the fact that it is established upon the principle of the greatest good to the greatest number, a principle of which no one need be ashamed, and for which no one need make apology. Union schools and transportation of pupils in those country communities where educational sentiment is most highly developed is not only a rec-

*Paper read before the West Virginia Educational Association, Mountain Lake Park.

ognition of this principle, but of the inherent strength of the graded school itself. Those leaders in education who have been inclined to accept without refutation the criticisms of our school systems by captious judges need to be reminded that those who have established and built up our great educational systems and who are now directing and maintaining them may well be proud of their workmanship.

The defect which is most commonly attributed to the graded school is that it hinders the personal and individual development of the pupil. It is well for the friends of graded school systems to admit at once that this is the most vulnerable part of that which they support and defend. The claim that the pupil in the ungraded school has opportunities for individual development not accorded to the one who attends the city or town school is not upheld by the facts. It is true that there are exceptional cases of bright boys and girls who because of their brightness have been the recipients of the special attention of the teacher. But it will not do to estimate the work of a school and of a teacher by what has been done for the advancement of the smarter pupils. While the exceptional boy in the county school, with the special assistance of the teacher, has been able to equal in progress, if not surpass his brother in the town or city, the boys and girls of moderate ability have been neglected, and those who were most in need of personal and individual instruction have received the least attention.

The lack of individual instruction in the graded school is incidental to the system and not necessarily an inherent part of it. In other words, the teacher in charge of fifty boys and girls of all degrees of advancement in an ungraded school is compelled by the very condition of things to recognize and attend to the individual wants of each pupil, while the teacher in charge of the same number of pupils of uniform age and advancement, having greater opportunities for giving each pupil personal and individual attention, is often tempted to herd her pupils together and deal with the mass rather than the individual, because the system from a certain amount of simi-

larity has placed the children all in one grade. There is no reason why the teacher of a grade should not have greater opportunities for attending to the individual needs of her pupils than does the teacher of an ungraded school. Pupils of a grade have a certain amount of similarity. This is found in age, in mental and physical development, and in the emotional nature. Recognizing these facts, no one can deny that there are many advantages in placing children in the grades according to these similarities. And that these advantages are in no sense discounted by anything inherent in the graded school system. The trouble has been that superintendents, principals and grade teachers have assumed that the similarities of the pupils placed in a grade in accordance with our systems are greater than they actually are, and, acting upon this assumption, courses of study and methods of instruction have been formulated with particular reference to masses of pupils, and with no attention to the individual pupil.

The weakness of the graded school in this respect can at once be remedied by teachers giving personal recognition of the peculiar mental, physical and emotional characteristics of the individual pupil. This does not mean that the teacher shall not economize time by basing a considerable part of her work upon the similarities of the children in her grade. My meaning cannot be more clearly expressed than by saying that each pupil in the grade should feel at the close of the day that it has received some personal message or attention from the teacher, which has satisfied an individual longing, or supplied an individual want.

The greatest problem growing out of the individual needs of pupils is that of grading and promotion. This question must be considered not only from the standpoint of the pupil, but also from the standpoint of the course of study. In connection with the pupil the one who attempts to solve this problem must take into consideration the different degrees of natural ability in the pupil, slow and rapid processes of mental growth, and irregularity of attendance which affects the advancement of pupils in every school. Difficult as are the questions from the

standpoint of the pupils, they are easy as compared with those dealing with the course of study in reference to the pupil. As a prominent educator has well said: It is not a difficult matter to move pupils on through the grades at irregular intervals when the acquirement of so much book knowledge in a formal way is all that is required, but the problem becomes a much more serious and difficult one when constant provision is made for the thought side of education as above the formal side. The real test of a plan of promotion with reference to the individual needs of pupils must lie in its power to satisfy our newer conception of the course of study and our newer ideas of teaching. In addition I would say that no plan of promotion which sacrifices the newer conception of the course of study can have good results. Time as an element in mental growth, and the thought process as a means of mental culture far outweigh the mechanical completion of a text-book.

In order that these problems may be properly solved the teacher, principal and superintendent must bring to their solution the ability to exercise temperate and impartial judgment in dealing with the various questions that arise out of the peculiar needs of individual pupils. They must often stand as the umpire between the unreasonable demands of the too ambitious parent, who is insistent on the advance of a child that is neither physically nor mentally able to meet the strain that such advancement will require, and in addition to this they must be able to restrain the pupil who is in too great haste to receive promotion, without checking its laudable ambition to advance.

In some cases the earnest desire to free the graded school from the evils of machine methods of grading and promotion lead to the adoption of such plans as tend to magnify rather than lessen the things

which are sought to be avoided. For example, a method of which I have read considerable and have seen a little provides what its friends are pleased to call short steps clear up the graded ladder by arranging pupils of the lowest standing in the first row of seats in the room, the next highest in the second row and so on. Now, I am impressed that this method of such numerous grades and of so many consequent changes must result in giving the pupil a magnified conception of the machine, and a too self-conscious feeling of its own relation to it. My opinion is that the less the pupil is impressed with the machine of grading and promotion, the more natural and thorough will be his progress. Too often our graded schools are like hothouses in which children are over-stimulated, and surrounded with artificial incentives that give a sickly cast to faces that ought to shine with healthy ambition. The problem of promotion is a difficult one at best, but it becomes doubly so when a whole school lives in an atmosphere of per cents, requirements, threats of demotion, and promises of advancement. In such a school the work of educating children has been lost sight of in the intense struggle to meet the requirements of the machine. I think we have magnified this one evil by paying too much attention to it. The graded school of the future will not be so much of a machine as it is now, and more of a work-shop in which the individual needs of all pupils will be given abundant opportunity for free growth. In the evolution that must bring great changes in the graded school system the advantage of having pupils in masses for instruction and discipline will continue, but there must certainly be greater provision for individual growth and personal effort.—*The West Virginia School Journal*.

PSYCHOLOGY AND CLASS INSTRUCTION.

BY PROFESSOR EDWARD FRANKLIN BUCHNER.

There is something soothing in the possession of a general principle. It leads us, like the confidence in grandmother's panacea, to be calm and brave in facing the problems of new ills. Education has been at work many a year trying to get a few principles which would explain the facts in the child's life, and at once serve as recipes for the teacher who wishes to know "what to do next" in child-training. In this respect, pedagogy is more venturesome than our accepted sciences, which are satisfied to get the principles of explanation applicable to natural phenomena, and leave to others the inquiry into the application of those principles in the interests of the achievements of civilization, as, e. g., is instanced in the relations between physics and engineering. Pedagogy continues to thrive, however, on a few Janus-headed principles, one of which I wish to consider under a title which suggests both theory and practice.

We should now-a-days suspect the soundness of a teacher's common sense should he dissent from the pedagogical precept:—"Awaken and employ the pupil's self-activity." Self-activity seems to strike clearly at the fundamental feature of the child's constitution, and at once to express briefly the patent requirement of teaching. Mental development is thus said to be development from within, and not from without; and learning is made completely the result of constant doing on the part of the child. This growing appeal to self-activity makes psychology and pedagogy dynamic in one and the same breath.

When we proceed to inquire into the meaning of self-activity, and ask for a formulation of the principle thereof for educational ends, it is discovered that the credulity of common-sense is altogether too generous. This particular region of thought cannot be illuminated by definitions as these are ordinarily projected. In pedagogy, as elsewhere, thinking is readily clogged by abstractions and catch-words, and the teacher is often beguiled into possessing certain conceptions through the mere force of repetitions by

the lesson-fashioners. In the last decade, "self-activity" has undoubtedly become one of those entrapping catch-words, from whose baneful influences it will require a generation of critical pedagogy to free us. A present leader in educational work was not long since over-heard to clinch a long series of arguments regarding the subject of "interest" in school work, with the proposition, "Given the self-activity of the mind, the mind will act!"

One of the marked weaknesses in the formulation and defense of the principle of self-activity is the confusion of thought which overlooks the radical distinction which must be made between self-activity as a fact in mind structure and function, and self-activity as a principle of understanding the foregoing fact in the interest of applying it to educational ends. Illustrations of this confusion abound on every hand; for example, where it is maintained that mere movement, and even provisions for movement, are taken as an inductive basis for the generalization represented in self-activity as a principle. It is true that one of the most widely distributed class of facts in human experience is that of movement. Whithersoever we may turn our attention, it is there met either with actual movement, or with adaptation for movement. In the physical world, movement is taken as an indication and as a measure of energy. The actual performance of some sort of movement is regarded among biological phenomena as a universal condition of life and of consciousness in the mental realm.

The confusion of thought with which our educationists are charged is further instanced in the fact that they fail to see that the provisions for movement, by way of structure; the life-history of particular movements, by way of description; and the exact functions of typical movements in their biological and psychological effects, are three distinct phases of one's conception of movement in general, and of one's treatment of any movement in particular. Too often the tendency is to consider movement in one phase only,

and to insist that self-activity is going on wherever movement is observable. Many movements, as such, are not of immediate concern in education. Some of these appear in the early stages of organic development, and would ensue in the absence of any provisions for education, specifically regarded. The muscular control of the end-organs of sensation represent one large class of such facts. The walking of a person, for example, as a series of mechanical adjustments which nature provides on her own part, is not the prime thing for the teacher's attention. (Class instruction may, in a remote, organic way, be dependent upon walking, as an essential condition.) When, where, and possibly some phases of how the movement takes place, are important items for the teacher. Let it be emphasized, however, that we do not usually speak of the child's "learning to walk" just as though that process were pedagogically identical with "learning to do long division."

If we approach more closely to a description of self-activity, we soon find it to be something which the teacher cannot put into the pupil. It is that which the child has, or has not, irrespective of the teacher. It is a part of his structural equipment for the appropriation of educational material. It is, however, a significant mode of expression to say "arouse," or "awaken" the child's self-activity. This implication of slumber on the part of the child's mind is not entirely misleading. All educational forces must find the child fully awake ere they enter him for his weal or woe. In so far as this condition of acquisition and expression refers to voluntary control, self-activity is of one kind only, appearing in two forms of positive effort and inhibition. To this extent it does not vary in quality with the changes in objects which appear in the work of a class. On the other hand, the characteristic features of self-activity change with the successive variations in the content of the self. Herein the accretions of experience alone enable the pupil to cope with the array of objects presented in the course of study planned for the carefully graded school.

The teacher is largely dependent upon

the psychologist for an analysis and characterization of self-activity and the ascertainment of its conditions. The schematism which obtains from this treatment has a certain amount of validity for the school-room, and its most general or abstract aspects may suffice for understanding the typical needs in the task of teaching. What is of most moment to the teacher, however, is a familiarity with the indications and expressions of self-activity in the details of class-instruction. Conceding the fact of possible individual initiative, and endeavoring to conform the intellectual management of his class to the demands of the so-called principle of self-activity, the question immediately arises: How is the teacher to know when self-activity is present, and to what degree? As a bit of natural history in the school-room, and particularly in class-instruction, how is the teacher enabled to report upon the prevalence of this special kind of action? In this matter, the instruments of instruction and the ordinary rules of procedure profit nothing. Our sciences have not helped us to look within another's soul to give us the special vision we seek. There is no secret key to be placed in the teacher's hands, nor can he find a high road leading to the observation of self-activity in minds other than his own. This can be discovered only through an interpretation of the facts of external movement complexly understood, and an intelligence of the meaning of the ideas expressed in the more highly specialized forms of language. These interpretations come as the outgrowth of that tact and skill in judging which is the attainment of extended experience, and not as the application of a law established by scientific methods as valid for the objects concerning which that judgment is made. In other words, if a child has acquired a certain series of ideas, the teacher cannot be unquestionably certain that the child has put forth the activity of his own self, nor can the expression of those ideas be taken as a measure of the degree of activity involved in the acquisition.

In our modern schools, the individual mind as known to the psychologist and the census-taker does not constitute the unit of labor. We are prone to accept,

as the ideal condition of education, one teacher with one child. Nature, indeed, foreshadows this in the pedagogical relations which find expression in the maternal instinct. The tendency in current school administration is to grade instruction in terms of the quantitative relations of teacher and student. As a matter of fact, however, the actual conditions for organized instruction must be recognized, and it is well to note the acceptable features of these conditions, and to estimate their values, rather than to criticise the school system as it exists at the present time, filling the teacher with an ideal of conditions which is not workable. In our leisure moments, we may be free to dwell upon what we should like to see, but a pedagogy must be practical and actual, if it is to be anything at all.

The adoption of the principle of self-activity as a guide to class-instruction gives rise to several considerations. The principle must be adjusted *in concreto* to the question:—What kind of action (not mere movement), and how much thereof, is necessary to and admissible in class-instruction? Is self-activity, as a pedagogical principle, valid for teaching according to the credentials of psychology based on analysis of the individual, equally valid for a class of many pupils? Does an increase in the number to be taught invalidate the principle as such? Does the application of the principle vary with the number receiving instruction? Various, rather than uniform, answers must be given to these inquiries. Adjustments will be found to be dependent upon the characteristics of objects of study appearing in the several grades (usually known as “subjects”), rather than on changes in control and expression on the part of the pupils. (To this last statement, one exception must be made, namely, that of language, which becomes, in the course of mental development, the most refined form of expression, and the truest indication of real activity.)

Inasmuch as the recitation centralizes the work of our modern school, the guidance afforded by the principle under consideration might well be indicated by a summary characterization of the conditions of a good class exercise. Attention, so often spoken of, is the most important

condition, as the primary mental attitude towards the object being taught. There must be a unity of the class, a social integration of the children, so to speak, for the time being, in the particular problem. This quality of guidance forces a departure from text-books and memorized statements beyond the presentation of the material for instruction. Class-instruction can never truly be made a “test.” It also demands the individual expression of pupils to be judged by the teacher in light of his knowledge of the principles of the subject being taught.

The minimization of particular and essential difficulties in the interests of ease and pleasure for the pupils does not induce self-activity. Clearness of conception concerning the object taught is essential; but the mere logic of the subject-matter, or of the particular exercise in any given grade is not to be mistaken for self-activity. The consciousness of power, which is well awakened by the school age, affords opportunity to bring the child to a sense of responsibility in getting information and right ideas about the things coming up for instruction. And, finally, the instruction should be so conducted as to permit of that sort of pupil-expression which reveals him as a living, knowing entity, a peer of others. These suggestions apply only to those classes whose composition permits of normal attainments. They are also made in light of the variation of the material and methods which follow the grade of school from the primary to the college or university. These conditions are confessedly meager to one who insists upon receiving specific prescriptions for every step in class-instruction. The applications of the principles of self-activity to instruction cannot be made in any such manner as that by which a home-made salve is spread over an open wound. The real question is whether this principle can be placed upon a practical and acceptable working basis. The considerations thus far offered, it is believed, tend to maintain that it can be so regarded.

The specific values of the guidance provided by this principle can be brought to light through a detailed consideration of the several types of recitation, or methods of class-instruction. The

features of each type are to be considered in their probable effects upon the individuals of the class taken collectively. There can, however, be no great degree of certainty as to just the scope and the degree of these effects, owing to the complexity of the conditions under which these reactions of the mind arise. These specific values will also vary from subject to subject, and from grade to grade, inasmuch as the type of class method will vary with these conditions of giving instructions. The so-called *Socratic method*, which is the chief type of modern methods, and was reinstated and adapted for primary work by Pestalozzi, aids the pupil in maintaining the attitude of the learner through the skillful questioning of the teacher. It brings the latter into closest touch with the former, but finds its most marked limitations in being restricted effectively to the individual. The *topical method* introduces the contribution of accessory material, tends to promote systems of ideas, and preserves continuity of thought in the mind of the pupil. These values appear, however, only as a result of unusual industry in the pursuit of the topics. The method of discussion, where each pupil is given equal rights in the acquisition and expression of information, induces the unparalleled benefit of forcing each pupil back upon his own ideas and strength in the defense

of the positions he may maintain. There are two plans of conducting class work which are undoubtedly valueless in light of the characteristics and limitations of the self-activity of mind. These are the *book* and the *lecture methods*. The former mechanizes the industry of the pupil, while the latter reduces the instruction to the weakest order of acquisition. The various devices of instruction introduced to persuade the individual to contribute to the progress of the class, such as giving answers, etc., consecutively, promiscuously, or in concert, are to be estimated indirectly according to the measure of their dependence upon the principle. The practice of mutual assistance among the pupils themselves, a wide-spread educational tradition which dates from Bell's monitorial system of school organization, must also be judged in light of the determination of independent effort on the part of the learners. Every teacher soon learns from his experience that the assignment and the exaction of duties in the school are not ideal or effective methods of stimulating self-activity. And above all, letting the children "have their own way," is the very opposite of the agency which the school must recognize in order to train the child's mind in the accomplishment of that work.—*The Educational Gazette*.

METHOD AND CONTENT IN EDUCATION.

GEORGE ALFRED BROWN

Dr. Cook has used the very apt expression of "complementary addresses" in referring to the papers read by Dr. W. T. Harris and Dr. G. Stanley Hall at the meeting of the educational council in Detroit. Dr. Harris in discussing "Isolation" seeks to express the essential nature of the educative movement in terms that relate to the difference of condition brought about by the knowledge content involved in the movement, and Dr. Hall in discussing the "Ideal School" seeks to relate the educative movement to the physical laws governing the development

of body and brain in the growth of all children. These are the complementary phases of the problem of a method for instruction in the school.

There are other elements in the complete problem of what shall be taught and how shall the school teach, but in the question of method alone we have as the two extremes, a method disregarding all facts of brain development and of the physical life and growth of the pupil, and a method disregarding all thought of transforming, by means of intellectual culture, the motives of individual life.

One extreme gives excessive emphasis to knowledge, the other gives excessive emphasis to the law of organic evolution in physical life. Every idea of method that considers the school as an integral part of the general life-activity and not as an isolated and artificial incident therein, will lean toward one or the other of these extremes. Which way it will lean must depend on a more fundamental conception touching the possible relations of human life to God and to the world.

One who conceives of those relations as being purely individual and direct between man and God or the world will adapt his method to the purpose of establishing habits and training the power for response to right native tendencies, since he must depend, for the establishment of a unity of interests in the world, largely on the law of survival in the evolution of a higher selfishness, and on the power of the God of Moses to establish the promised land. One who feels that an individual relation to God and the world is possible only in his human relations to his fellows must perceive that the source of human purpose is transferred from the sensations of the implicit feeling and will of individual life to the convictions of complete consciousness through the power to know, i. e., in the final analysis of knowledge, to distinguish good and evil. It is only in the mental attitude of conviction, which arises through the intellectual power of the human mind to trace results to causes, and so, through this perception of responsibility for the actuating purposes of deeds, to come to the recognition of duty, that the feeling and will of each individual comes to be a common attribute of many and thus enables self-consciousness to express or outer itself by realizing itself in institutions. With this conception of the fundamental relations in the world, the idea of method in instruction can not confine itself to the training of habit, for now instruction must be able, by the proper and sympathetic sequence in the presentation of knowledge, so to quicken the ideal stirring of human life which establishes convictions of duty and action as to result in a change of the whole scale of values of our motives and so throw all habitual actions out of their equilibrium with old

motives and temptations.

The outcome of instruction must be a power to interpret the sequence of facts as laws, to translate laws into an expression of purpose and to find in this organized struggle and endeavor of all activity life's opportunity for spiritual mastery. This means that the school must teach the adequate means for an expression of the common thought by which human sympathy interprets its environment. The sign of culture is found when "the primrose by the river's brim" is appreciated as an expression of power and purpose and so becomes more than "but a primrose," or when the invariable sequence of a succession of events is interpreted not simply as the hand of fate but as the expression of a law of which advantage may be taken in governing the environment. Whatever may have been the necessary dependence of primitive man on the slowly acting laws of physical evolution and on beliefs in a super-human power having immediate direction over human affairs, civilized man has attained the directing power over his intellectual and spiritual evolution through the development of his institutional life to the point where the responsibility of government may be safely shared with all in an equal freedom.

If the intellectual movement of the human mind resulted only in the organization of will into attention, to the end of determining simply the relation of facts to each other, then must man remain in the condition of a gregarious animal. He attains civilization only as this intellectual power is concerned ultimately with transforming responsive or "determined will" (as Denton J. Snyder calls it) into "free will," i. e. the will as willing freedom from the determined conditions of individual life. For with the intellectual movement limited to the organization of attention only, man would remain under the conditions of determined will and could but choose a swift horse instead of a slow ox for transportation purposes, whereas with the intellect concerned in the control of the conditions of life for the better expression of man's own purposes, the will toward freedom invents the railroad. Similarly under the first condition of the intellect

the law of "Do unto others as you would that they should do unto you" is the full requirement of justice, but under the second condition, charity, the requirement of the Good Samaritan, so organizes social aims that there shall be infinite opportunity to individualize the universal good.

With each step that man has advanced out of savagery the world of opportunity for his activity has widened in a more than double ratio, and the fields of knowledge involved have similarly widened. When man had little knowledge of the laws by which the physical and ethical determining conditions of his life were controlled, the method of the school needed to concern itself with but little beyond giving that poise and attitude of body and mind to be attained by learning to ride a horse, to shoot an arrow and to tell the truth. But when the possible di-

rections which man's activity may and must take if he maintain or advance his present civilization are almost infinite by comparison with primitive life, the method of the school must concern itself not only with the poise of culture in body and mind, but also with the organization of that "Free Will" which transfers the activity of the mind and soul from its internal field to the external world. The attitude in the school of boy driver must be ever ready to change on the instant to the attitude of teacher and leader in the discovery of an aim and purpose for the activity of some individual to be drawn from the proper correlation with life of the facts of knowledge then being studied. The preservation of civilization depends on the written and printed word, the advance of civilization depends on the method of teaching that word.—*School and Home Education*.

TEACHING AS A BUSINESS FOR MEN.

Some men teach because they feel that they have "a call;" some because they believe that in this way they are able most effectively to "do good;" others teach because they like to teach—"a love for the work" is a common cant phrase for this motive. Many teach because they have found, or think they have found, that on the whole they can do as well or better, financially, in this occupation than in any other. Usually this class are cruelly undeceived before they reach fifty.

Teaching as a business, in America, is rapidly passing over to the women; and men might as well face this fact and make their calculations accordingly. There is still left some chance for a career for a man in school supervision, but even this is precarious—almost as uncertain as politics. Young men who think of teaching as a life work should ponder well the following wise words from a wise man who knows all about

it—a man who made as thorough and extended preparation for the profession as any man in America ever made, and who has held some of the highest positions. Dr. Edmund J. James, of Chicago University, says:

"I venture the assertion that the majority of the men who fill professors' chairs in colleges and high schools today are there because they were forced to teach upon leaving college, and, becoming stranded, had no choice but to remain teachers. Teaching offers the largest pay to an unskilled college graduate. Teaching as a rule does not tempt bright men because of the poor prospects and uncertain tenure of employment. The ordinary prospects of a Chicago teacher are made still more miserable because of the policy of decreasing expenses by lopping off departments or shortening the school year. The system is demoralizing the city schools.—*Western Teacher*.

MEXICAN MOT MOT.

MOT MOTS are peculiar to the new world, being found from Mexico throughout the whole of Central America and the South American continent. The general plumage is green, and the majority of the species have a large racket at the end of the center tail feathers, formed by the bird itself.

The Houton, (so called from his note,) according to Waterson, ranks high in beauty among the birds of Demerara. This beautiful creature seems to suppose that its beauty can be increased by trimming its tail, which undergoes the same operation as one's hair in a barber shop, using its own beak, which is serrated, in lieu of a pair of scissors. As soon as its tail is fully grown, he begins about an inch from the extremity of the two longest feathers in it and cuts away the web on both sides of the shaft, making a gap about an inch long. Both male and female wear their tails in this manner, which gives them a remarkable appearance among all other birds.

To observe this bird in his native haunts, one must be in the forest at dawn. He shuns the society of man. The thick and gloomy forests are preferred by the Houton. In those far extending wilds, about day-break, you hear him call in distinct and melancholy tone, "Houton, Houton!" An

observer says, "Move cautiously to the place from which the sound proceeds, and you will see him sitting in the underwood, about a couple of yards from the ground, his tail moving up and down every time he articulates "Houton!"

The Mot Mot lives on insects and berries found among the underwood, and very rarely is seen in the lofty trees. He makes no nest, but rears his young in a hole in the sand, generally on the side of a hill.

Mr. Osbert Salvin tells this curious anecdote: "Some years ago the Zoological Society possessed a specimen which lived in one of the large cages of the parrot house by itself. I have a very distinct recollection of the bird, for I used every time I saw it to cheer it up a bit by whistling such of its notes as I had picked up in the forests of America. The bird always seemed to appreciate this attention, for although it never replied, it became at once animated, hopped about the cage, and swung its tail from side to side like the pendulum of a clock. For a long time its tail had perfect spatules, but toward the end of its life I noticed that the median feathers were no longer trimmed with such precision, and on looking at its beak I noticed that from some cause or other it did not close properly, gaped slightly at the tip, and had thus become unfitted for removing the vanes of the feathers."



MEXICAN MOT MOT
 $\frac{3}{4}$ Life-size.

COPYRIGHT 1900, BY A. W. MUMFORD, CHICAGO



THE KINGFISHER.

The Lone Fisherman.

THE American species belongs to the true group of Kingfishers. It occupies the whole continent of North America and although migrating in the north, he is a constant resident of our southern states. The belted Kingfisher is the only variety found along the inland streams of the United States. Audubon declares that "belted" should apply only to the female, however.

Like most birds of brilliant plumage, the Kingfisher prefers a quiet and secluded haunt. It loves the little trout streams, with wooded and precipitous banks, the still ponds and small lakes, ornamental waters in parks, where it is not molested, and the sides of sluggish rivers, drains and mill-ponds.

Here in such a haunt the bird often flits past like an indistinct gleam of bluish light. Fortune may sometimes favor the observer and the bird may alight on some twig over the stream, its weight causing it to sway gently to and fro. It eagerly scans the shoal of young trout sporting in the pool below, when suddenly it drops down into the water, and, almost before the observer is aware of the fact, is back again to its perch with a struggling fish in its beak. A few blows on the branch and its prey is ready for the dexterous movement of the bill, which places it in a position for swallowing. Sometimes the captured fish is adroitly jerked into the air and caught as it falls.

Fish is the principal food of the Kingfisher; but it also eats various kinds of insects, shrimps, and even small crabs. It rears its young in a hole, which is made in the banks of the stream it frequents. It is a slatternly bird, fouls its own nest and its peerless eggs. The nesting hole is

bored rather slowly, and takes from one to two weeks to complete. Six or eight white glossy eggs are laid, sometimes on the bare soil, but often on the fish bones which, being indigestible, are thrown up by the bird in pellets.

The Kingfisher has a crest of feathers on the top of his head, which he raises and lowers, especially when trying to drive intruders away from his nest.

The plumage is compact and oily, making it almost impervious to water. The flesh is fishy and disagreeable to the taste, but the eggs are said to be good eating. The wings are long and pointed and the bill longer than the head. The voice is harsh and monotonous.

It is said that few birds are connected with more fables than the Kingfisher. The superstition that a dead Kingfisher when suspended by the throat, would turn its beak to that particular point of the compass from which the wind blew, is now dead. It was also supposed to possess many astonishing virtues, as that its dried body would avert thunderbolts, and if kept in a wardrobe would preserve from moths the woolen stuffs and the like contained in it.

"Under the name of "halcyon," it was fabled by the ancients to build its nest on the surface of the sea, and to have the power of calming the troubled waves during its period of incubation; hence the phrase "halcyon days."

A pair of Kingfishers have had their residence in a bank at the south end of Washington Park, Chicago, for at least three seasons past. We have watched the Kingfisher from secluded spots on Long Island ponds and tidal streams, where his peculiar laughing note is the same as that which greets the ear of the fisherman on far inland streams on still summer days.

PLANS OF GEOGRAPHY TEACHING IN THE GRADES.

SUPERINTENDENT SPAULDING,

Passaic, N. J.

Most modern texts on geography advise the teacher in the preface or introduction that the earth should be studied as the "home of man," and that the study of this subject should begin with "home geography." But no text-book known to me is so constructed as really to encourage the teacher to follow this most excellent advice in a way adapted to children. The earth is presented as an abstract home, inhabited by abstract men, living under abstract relations to their home. Consequently, we have felt obliged to break away somewhat from the lead of the text-books in this subject. We are still feeling our way, but, from results already obtained, have much confidence that we are improving on our former methods.

"HOME GEOGRAPHY."

Our plan and aims, to be very brief, are as follows: That little portion of the earth which is within the immediate experience of the child is studied as the home, in the geographical sense, of himself, his family, and the people whom he knows and sees. This involves not merely the observation of typical geographical phenomena at hand, mountains, hills, valleys, rivers, winds, rain, etc., and the storing of the mind with the images of these things, associated with their appropriate names, but especially the study of the influence of these on the occupations of the child's parents and men whom he sees and knows, and, in turn, the efforts of these well-known people to control and utilize these particular phenomena of nature in making for themselves homes. The aim is to cultivate in the child a habit of looking at the earth and people within his experience from this geographic point of view; he must come really to feel this "home" relation between that part of the earth and the men within his experience; if the idea is an abstract one at this point, it will be doubly abstract when the attempt is made to realize it in those portions of the earth and in those people beyond direct experi-

ence. In the study of these home relations at home, a text-book is only a hindrance; the child needs to see things at first hand.

ABSTRACTIONS AND UNREALITIES.

The study of the occupations of men here and the exchange with each other of the products of their labors leads inevitably and frequently to the thought of other people and portions of the earth at a distance, whence the products of labor are received and whither they are sent in man's universal effort to make a habitable home for himself. But these leads are perused only incidentally, with the aid of pictures, stories, etc., until the time comes for the child to leave the circle of his immediate experiences. This is the point at which this study, however concretely and realistically carried on until now, is in great danger of becoming to the child a mass of abstractions and unrealities. The average child of ten or eleven is unable to go at a bound from little concrete ideas concerning the relation of parents and friends to the little portion of earth with which he is familiar to large abstract ideas concerning the relations of distant peoples and nations to distant and large portions of the earth. The attempt to make the child do this too often renders geography the driest and most distasteful subject in the curriculum, while it ought easily to be one of the most interesting.

ENLARGEMENT OF THE GEOGRAPHICAL HORIZON

How can the child enlarge his geographical horizon? How can he pass beyond the narrow circle of his immediate experiences to the earth and people beyond, and still retain the sense of concreteness and reality, just as the eye of the observer in a well-arranged cyclorama wanders from the solid earth and flowers at his feet to the fields and distant hills of the picture without perceiving where the real merges into the ideal? This is the question which we are trying to answer in our practice in teaching geography. Thus far, we have been most

successful in having the children actually go in their imagination from their home to the parts of the earth to be studied. The journey, the places, the people, their occupations and the features of the earth, are made as realistic as possible by the free use of railroad guides, time-tables, maps, pictures, stories of travel, illustrations, and descriptions of occupations, industries, commercial activities, etc. Thus, the concrete geographic phenomena are actually and vividly seen in the imagination by every pupil, and seen in their real relations. But the study is not allowed to end here with merely pleasant observations; this is rather the beginning. When the pupil has been brought, in his imagination, into the very presence of the phenomena which he is to study and understand, he studies them just as he was taught to study the geographical features of his home and the relations of his home people to these. He studies, of course, under the direction of the teacher who is guided chiefly by two questions: "What are the people doing here?" and "Why are they doing it?" In this way, pupils are brought to the very heart of the subject, and are held constantly to the study of the real earth as the real home of real men. Their observations are directed along the line of their liveliest interests, viz.: to the occupations of people, and their thoughts to the discovery of the reason for such occupation in each case; this at once opens up the whole subject of surface, location, drainage, climate, etc., and these factors are studied concretely, on the ground, and not as mere abstractions. When a natural unit, as a continent or a nation, has been covered in this way, a review is taken topically, which serves to systematize and summarize the pupil's knowledge, and to bring it into much the same form as that in which the text-book presents it at the outset. The pupil is now able to appreciate the generalizations of the text-book; they are no longer mere words, but serve to awaken in his mind concrete images of things on which they are based, and thus they receive from the pupil's experience—as all words that mean anything must—their content and verification.

JOURNEYS IN THE IMAGINATION.

This is not the place to go into the de-

tails of this method farther. It must not be confused with the ordinary imaginary journey frequently taken for recreation, generally after the country in which it takes place has been studied in the usual way. Our children do not make imaginary journeys; they actually go in their imagination. They do not go for recreation or to review and display the abstract knowledge which they have already acquired; they go for study, to get knowledge from the observation of concrete facts presented as nearly at first hand as conditions will permit.

MENTAL CULTURE AND LOVE OF NATURE THROUGH GEOGRAPHY.

It is scarcely necessary to add that geography, studied in this way, is intensely interesting, to both teachers and pupils. The practical, usable knowledge gained and retained far exceeds in amount that acquired by the usual methods. At the same time, the mental culture necessarily resulting from this constant process of observation and inference must surpass in both quantity and quality that obtainable from the memorizing of others' observations and conclusions, however accurate and just these might be. And it is not too much to expect that the observation and study of the intimate relations, home relations, existing between man and the earth all over the world, if carried on in the right spirit, sympathetically, will serve to foster a real filial love of Mother Nature, quite as much as will the usual nature studies.

NATURE STUDY.

But the inexhaustible wealth of nature's phenomena is not compassed by geographical studies, even of the character just described. There are many stand-points beside the geographical from which nature may be approached, and each reveals countless new phenomena as well as new aspects of the old and familiar. The somewhat heterogeneous studies of nature which are carried on regularly in all grades from the kindergarten upwards, we designate by the simple comprehensive term Nature Study. The aim of it all is to enrich the mind and to cultivate the spirit of the child; to train his powers of observation, to stimulate his thought, and to bring him into closest touch and sympathy with Mother

Nature and all her children. Nature study needs no defense nor apology. When we stop to reflect that nature, as here understood, is one of the two great sources of all our first-hand ideas, the only wonder is that it has not been given

a place sooner, and a more prominent one, in every school in the land. As wisely might one attempt to grow a strong tree in sawdust, without soil, as to teach a child from books alone, without recourse to nature.—*The Intelligence*.

INDUSTRIAL GEOGRAPHY—INDUSTRIAL DEVELOPMENT OF NEW ENGLAND.

PHILIP EMERSON,
Cobbet School, Lynn, Mass.

The development of life in the section of country where a student lives of course affords him the best illustration of industrial changes, because he may there base his study on a personal acquaintance with many of the facts. New England, however, is of special value for all as a type of social evolution, since in the course of a century or so, life there has changed from the primitive ways of pioneer conditions to the complexity of a community of manufacturing and commercial cities. In no other considerable section of the United States is the character of agriculture, commerce and the other industries so closely dominated by the modern system of manufacturing. Though there are several larger commercial and manufacturing centers elsewhere, no other large part of the new world is so thickly set with cities of considerable size as eastern Massachusetts and neighboring districts.

During the first two centuries of New England history, pioneer conditions largely prevailed, except in the coast towns. In England the few owned the land; here there was land enough for all the sons of a family to gain homesteads of their own by clearing away the forest. Acts of Parliament prevented the free growth of manufacturing in the colonies, and aimed to secure the production of foods and raw materials only. Colonial laws at first limited the wages of laborers, and otherwise hampered them, so that nearly all chose to secure independent homes. With the desire for land ownership, and in default of other opportunities, the frontier was pushed out over the uplands in spite of Indian wars, and a

century ago the people were scattered in isolated homesteads over all New England south of the great northern forest.

In early times the lack of modern means of cheap and quick transportation obliged the great majority of people to engage in agriculture as a source of food supply; and, as well, compelled every family to pursue a dozen other crafts in simple fashion to meet their needs. This was very true of New England, where the early trails and rough cart ways gave place but slowly to respectable roads. Farmers from the interior toiled down to the coast with slow teams, once a year, to exchange some light and more valuable farm or forest products for imported goods; but in the main every farmer was a home manufacturer of all he needed for food, clothing, shelter, heat and light.

In the warmer climate and more fertile soil of the southern colonies, farm labor continued much of the year, and generous crops of tobacco or rice enabled the planters along the river highways of the coastal plain to secure much from Europe by means of trade. The severe winter climate of New England, and the failure of its rocky soil to produce any important commercial staple during the short summers, occasioned a different life. Warm clothing was needed, and each isolated home or community supplied it. All farms kept a variety of domestic animals; nearly every town had a little tannery; many farmers made from the leather thus produced at home the shoes needed for the family. Some of the more skilled served their neighbors during part of the year, this being a first step in the specialization of industry.

Similarly from home-grown wool and flax, fiber was prepared with a hetchel or card, yarn was spun, and coarse cloth was woven at home on rude hand looms. As time passed little mills for carding wool and for dyeing and finishing the cloth were established in most communities, and in the older sections some people came to be employed as weavers in making cloth to order for their neighbors from yarn supplied them. But all the early manufacturing was a neighborhood affair, if not confined strictly to the separate homes, and nearly all the people were farmers, whatever else they might do in the course of the year.

Toward the close of this period, Alexander Hamilton, in his report on manufactures to Congress, in 1791, emphasizes the "vast scene of household manufacturing which contributes more largely to the supply of the community than could be imagined without having made it an object of particular inquiry. Great quantities of coarse cloths, coatings, serges and flannels, linsey-woolseys, hosiery of wool, cotton, and thread, coarse fustians, jeans and muslins, checked and striped cotton and linen goods, bedticks, coverlets and counterpanes, towel linens, coarse shirtings, sheeting, toweling and table linen, and various mixtures of wool and cotton, and of cotton and flax, are made in the household way, and, in many instances, to an extent not only sufficient for a supply of the families in which they are made, but for sale, and even in some cases for exportation. It is computed in a number of districts that two-thirds, three-fourths and even four-fifths of all the clothing of the inhabitants are made by themselves."

The first changes from primitive conditions came with the establishment of independent commerce, and the related growth of the ship-building industry. While farming supplied comparatively little that could be exported, the abundant fish of the coast waters and the excellent lumber of the forests, that then reached to the shore, found ready sale in the West Indies and in Europe. So the farmers along shore spent part of their time in the fisheries, and those inland got out shingles and clapboards, staves, ship-timber and potash, during times and sea-

sons when they could leave their fields. The submerged, or "drowned" coast of New England naturally abounds in harbors, and nearly every little port engaged in fishing and shipbuilding, and then conducted its own trade with other points of the North Atlantic, notwithstanding the restrictions of successive Navigation Acts. There were no railway centers in those days, and since the roads were wretchedly poor every farmer coming with produce from the interior favored some one of the ports nearest his home, and lumber and fish were near them all; so natural advantages were well distributed. Since all the vessels were at first small and of light draught, harbors long since abandoned as too shallow were then open to shipping and prospered. Commerce was not then conducted by means of the cable, but each voyage was a venture, the Yankee captains taking a miscellaneous cargo and trading from port to port, buying here and selling there, and netting their employers thrifty bargains of profit. Thus commerce developed, and the characteristics noted occasioned the growth of many small coast towns rather than a few large ports.

Successful trade brought prosperity to leading ship owners, and increased capital led to the building of larger ships. When the Revolution had removed the restrictions to navigation, voyages to China and the East Indies were undertaken and brought large returns. Swifter vessels were called for and the fine clipper ships were evolved, which amazed the world by their record breaking speed and gave America the second place in the carrying trade of the world. With the increase in the draught of vessels the growing commerce gradually deserted ports with shallow waters and became centered mainly at a dozen or so deep harbors. From these places turnpikes were built by chartered companies, and regular lines of stages gave some communication with interior points, thus emphasizing their natural advantages. When whales had to be sought in distant seas, convenience in outfitting the vessels and in handling the products led to the centering of this special form of maritime industry at a few points, New Bedford, Nantucket, New London, and Ston-

ington, particularly. Among the leading commercial ports were Portland, Portsmouth, Salem, Boston, Newport, Providence, Middleton and New Haven.

In the course of the changes of the past century some of these ports have sunk to second or third rank, like Middleton, once the most populous community in Connecticut. Most of the others that have sustained their standing have substituted other interests for the foreign commerce that has deserted them, and the whale fishing which has declined since the discovery of petroleum in Pennsylvania. This further process of selection has been accomplished largely through the building of railroads, which were extended from the ports best located and gave them insuperable advantages over others. Thus the mainland port of Providence was better situated to become a railroad center than the outer harbor of Newport. When a railroad from New Haven to Hartford was allowed to pass to one side of Middleton, the latter port was ere long distanced by even inland towns with better railroad connections, such as Meriden and New Britain. The northern deep harbor of Portland was better placed than that of Portsmouth to become a terminus of Canadian trunk lines, and farther removed from the local competition of Boston. In 1900 it had a population of 50,000, while Portsmouth had few more than 10,000.

Boston being the harbor farthest west on the re-entrant of Massachusetts Bay, and in a lowland basin whence valleys radiate to all southeastern New England, became of necessity the railroad center for all local traffic and the terminus in New England of the transcontinental lines that traverse the Mohawk Valley. It is worth noting that when the line of the Mohawk Valley is continued eastward it cuts the coast at Boston. When the development of trunk lines and extensive railway systems was matched by the establishment of costly lines of steel steamships plying regularly between the leading ports of America and Europe, it became advantageous to both shippers

and ship owners to have but a few terminal ports, where the best facilities might be provided. At these great ports merchandise would gather and there very frequent sailings would be assured for both merchandise and passengers. Boston was naturally the port that gained nearly all the foreign commerce of New England not carried on through New York City. However, Portland has now a line of steamers to Europe in summer, as it long has had during the winter. Entries at other New England ports are mainly of coastwise schooners, barges and steamers.

The fisheries have likewise developed. The rude pinkies and snows of early days found abundant fish near home which were dry-salted on shore and exported by sailing vessels. Today the costly schooners are carefully outfitted for different fishing grounds; much of the catch is systematically marketed in the interior over the railroads; while the preparation of salted and smoked fish is conducted in large factories where all refuse is utilized in the manufacture of such by-products as glue, fertilizer and isinglass. Naturally a few ports have gained control of the developed industry, while smaller places are left to entertain summer boarders and cottagers. Gloucester has the largest fleet and most extensive factories, as it has a good harbor with railroad connections, and is on a cape projecting toward the fishing grounds. Provincetown is of this type. The fine railroad and wholesale trade connections of Boston bring to it the larger share of the fares of fresh fish; and in less degree the same is true of Portland.

In thus noting leading features of the growth of commerce and maritime industries, little account has been taken of the advance in manufacturing, which has afforded the basis for continued commercial progress. This must be presented in another article, which shall also show how the growth of factory cities has affected the prosperity and character of agriculture, lumbering, quarrying and other industries.—*Popular Educator*.

RELIEF MAPS.

BY SILVAN PLUMLY.

Muscataine, Iowa.

That all teachers of the new and real geography appreciate the value of a medium with which pupils can actually show the profile of a country is a truth that goes without saying.

Wealth of material as regards accessibility can be profitably employed by many nature-loving teachers who actually take the children out to study from the objects. Speed the day when the study will largely be directed to the observation of living things within the pupils' own environment. As it is now it is so apt to be confined solely to books, which at best are but a record of some other person's observations. There can be but one answer as to the comparative value of study from nature direct or from the product of some book factory. The sand pile for young children is a medium not to be despised, for by it the topography of the country immediately around the school may be reproduced. For older pupils a medium of more permanence may be desired, and a very excellent one is made from salt and starch.

It would be advisable to first begin with the school yard; then perhaps township or county, state and United States or continent.

Wishing to show our teachers the ease of using this medium we had some work done in our last year's institute which seemed to attract the attention of the Midland Schools representative. Securing outline maps of the United States, we prepared these for use by pasting them upon the heaviest bookbinder's board. To equalize the contraction, we pasted on the reverse side an equally thick brown paper. Thus made they were of sufficient strength to keep their shape, and dried comparatively straight.

Avoid doing this work on any board surface without first securing a strip across the ends to prevent warping, which is so very apt to spoil the whole effort. We prepared the material in three colors for contrast—red, blue and white. The red we used to show land surfaces

not belonging to the United States, putting Canada, Nova Scotia, New Brunswick, Mexico and Cuba in this color. Blue we used for the water. Strictly speaking, however, these surfaces should be shown by painting in water color; still by spreading the paste thin and flat it may serve its purpose. The white was used to show the profile of our own country.

To put on the paste we provided a small wooden paddle which, along with a convenient hairpin, well served the purpose.

We only attempted to show the more prominent inland waters in the blue. The Great Lakes, Salt Lake, the Mississippi, the Columbia, the Colorado and the Rio Grande, we thought were amply sufficient. To show productions we provided small paper bags containing about fifty of our best known of staple products—the grains, and objects like leather, cotton, wool, etc. Sometimes the names on the paper took the place of objects. These do not all add to the artistic appearance of the map, but as a means of determining different products and where produced they form for the child the greatest value of any part of the work.

This paste will keep in a jar placed in a cellar an indefinite period, and this relief work should be done by every teacher working in this branch at least once in a term, taking, presumably, some Friday afternoon for the work.

Now, lastly, for directions in making. Make common, clear starch just as is done on wash day. First, dissolve it in cold water using about five cents' worth of starch for two gallons of paste. Pour in boiling water, stirring it constantly till it cooks clear and then get a strong paddle and work in common coarse salt without lumps till it is of the proper consistency. It must not run on being spread out thin and yet must cleave together in making elevations. A little practice will determine how to make it. For the blue stir in some bluing—for the red some red ink. Have plenty of salt at

hand when ready to make, for it is surprising how much of this it takes. For the five cents worth of starch it will take about twenty pounds of salt. This will perhaps be sufficient for ten maps.

I have never seen the directions for this published and trust it will prove worth a trial at least by all live teachers.—*Midland Schools.*

THE PLACE THE SUBJECT OF FORESTRY SHOULD OCCUPY IN HIGH SCHOOL INSTRUCTION.

J. GIFFORD,

College of Forestry, Cornell University.

During the winter which has just passed I delivered a lecture for Dr. Charles De Garmo, of Cornell University, on the place forestry should occupy in high-school instruction. The class consisted mainly of teachers, and the course, of which the lecture above referred to was only a very small part, consisted of lectures by various educators on high-school instruction.

At first thought the majority of well informed individuals would say that forestry deserves no place in the already overcrowded curriculum of the high school. After I had made my position clear the opinion of the class seemed unanimous that some forestry, at least, should be taught in connection with, or as a part of, geography in high schools. A few at first argued with reason that if forestry should be taught, agriculture and a host of other subjects deserve a place. These persons, however, failed to realize the important role which the forest plays as a geographical agent in checking the destructive forces of nature, modifying the nature of the earth, and in molding the nature of the occupations of its people.

Forestry may be classed in two ways—first as a profession and second as a subject of general interest about which every well informed citizen should know something. In the first case the nature of the instruction should be detailed and technical and should cover a period of at least four years. This sort of instruction belongs to schools of forestry and agricultural colleges. There are already

two schools of forestry in this country—one at Cornell and the other at Yale University. There are many such institutions in Europe. It is to these schools where a student must go in order to become a professional forester. It is in such institutions that a student is taught how to properly form, tend, and utilize a forest. In addition to learning how to care for forests, he learns also how to survey, construct wagon roads and logging railroads, operate saw mills, etc. He is, in other words, a forest engineer.

In the second case, for the acquisition of knowledge of a general nature relating to the forest which every man and woman should know, the high school is the place. All are agreed that in case it should be taught at all it does not belong below the upper grades of the high school. It is also so that a very large proportion of our high school graduates would never acquire such a knowledge unless they get it in the high school, because many of our high-school graduates never go to colleges and universities and because many of our colleges and universities do not offer instruction in many of the most important subjects. There is no subject, for instance, of more general interest and of more importance than ethnology, yet how few even of our great universities offer instruction in this subject and how few of their graduates know even the names, to say nothing of the natures, of the peoples who once inhabited America.

It is not my intention to suggest the addition of another subject to the high-

school curriculum. It should be given, however, the place in physical and commercial geography to which its importance entitles it. It is very easy for a man to exaggerate the importance of his specialty. Few doubt, however, the importance of forests. As compared with Europe, general information on the subject is woefully lacking throughout this country. Very few know the meaning of forestry. Arbor Day celebrations have done much to stimulate an appreciation of trees, but these celebrations are often farcical, if not misleading, in nature. A song is sung, poetry recited, and then a few trees, often only one, are carelessly stuck in the ground, often in the very place which should be left open. A very small proportion of these trees live, however. "O, Woodman, Spare that Tree" is sung. A forester never hesitates to cut a tree if it is ready to cut, but he always plants more and plants them well. Aside from this question of Arbor Day, an institution which has been adopted in many parts of the world and which will do lasting good if properly conducted, why should forestry be taught in high schools? First of all, every great movement in this country must have popular support back of it. Our people must be educated to a point where they will know the advantages of a forest cover and the meaning of forestry. When this occurs the future of forestry is assured. The main cause of reckless, wasteful forest destruction in this country is ignorance. It is certainly one of the functions of the public school to overcome this difficulty. It is not necessary to introduce forestry into the public schools of Germany because forestry is born and bred into the body of every German. The proper care of forests is there a matter of course. Secondly, why does it deserve a place in high-school instruction in connection with geography?

I can only mention, in passing, the importance of the commercial side of the question. Think of the great lumber industries of the North, South, and far West, of the hundreds of thousands of railroad ties, telegraph poles, and bridge pilings, of the immense amount of wood used in construction for houses and

fences and the hundreds of industries which make use of it. Think of the rubber forests of the tropics, the naval stores industry of our South and maple sugar of the North. Think of cork, camphor, rubber, wax, dyes, medicines, and a host of products yielded by the forest in various parts of the world. The young man about to enter business should, in fact must, know something of these products. It is of interest to note in this connection that two mahogany logs sold for \$5,200 in Liverpool last year. These logs came from Africa and were purchased by an American.

It is not, however, on this side of the subject that I lay special stress. Although this is a part of commercial geography and although every young business American is eager to learn of the products, industries and occupations of every country, the side of the subject which relates to the influence of the forest in molding and beautifying the earth is of much more importance and much more in place in the geography of the common high school.

There is too little space for me to define it except in a general way.

1. The forest is a soil former. Vast areas of swamp lands consist of the black decayed remains of the forest. One tree in the tropics called the mangrove grows in salt water on the edge of coral islands. So much land is wrested from the ocean by its aggressive growth that it is often called the "landformer." The same is so of the willow, that Cinderella of trees, in northern latitudes. Trees cause the disintegration of rocks. The acid produced in the decomposition of organic matter causes the rock to crumble into soil. The tips of roots dissolve their way through soluble rock. In coral islands large trees may be seen growing out of the solid rock.

2. The forest is a soil improver. A virgin soil is a soil rich in leaf mold. The roots of trees penetrate to the deep layers of the soil and secure rich mineral matter, which is deposited on the surface with organic matter in the form of leaves and sticks. The only way to bring virginity back to a worn-out soil is to grow a forest on it.

3. The forest is a soil fixer. Erosion is

the wearing away of rocks and soil by wind and water. Shifting dunes, sandstorms, landslides and avalanches are prevented by a forest cover. The mass of roots hold the soil in place. Many countries have been rendered inhabitable by the planting of trees. Whole villages have been destroyed in Europe by landslides and shifting sands. This has been prevented by forest planting.

4. The forest is a flood preventer. The flow of water is retarded by the roots and litter of the forest floor. A flood to be conquered must be attacked in the hills of its source where its forces are scattered and easily controlled. The way to conquer it is through the agency of forest growth. The forest imparts a regularity to the flow, so that there is less high water in wet seasons and less low water in dry seasons. This means much to industrial establishments along the banks of a stream depending upon its flow for power. Snow melts slowly in the shade of the forest.

5. The forest is a windbreak. Nothing is more destructive than a hot dry wind. It blasts and levels crops. It parches the ground. Nothing is more wearisome to man and beast. Nothing is more grateful than the shelter of a belt of trees.

6. The forest beautifies the earth. The ideal country is the one in which there is proper mingling of forests and fields—forests in the mountains and fields in the valleys. A treeless country is distressing and monotonous.

7. The forest is a sanitary agency. Malaria follows in the wake of forest destruction. The purity of forest air is proverbial. It is a resting-place for busy brains. It is the source of good, pure water for many large cities. The war department is planting Eucalyptus trees in Havana province to prevent malaria and yellow fever. This has been done elsewhere with considerable success, especially in Italy and Algeria. The Lands of France was once a pestilential swamp. Since the planting of pine trees it has developed into a health resort. A forest occupation is healthy. It produces strong, broad-chested men. Would that

a large number of our population could find employment in the forest.

Another branch of the subject which is of interest from a geographical standpoint is the geographical distribution of forests over the face of the earth—why are there forests in one place and deserts and plains in another? What are the forces which cause the spread of forests and what are the barriers which prevent or restrict their growth? There are many aids to forest extension, such as winds, currents of water, animals, and man. There are many barriers which restrict their growth, such as cold, drouth, unsuitable soil, strong winds, animals, and fire.

There is still another phase of the subject which is of importance to the geographical student. Every American should have some knowledge of our great forest reservations and national parks.

These reservations have been set aside for the preservation of the timber and natural curiosities and extraordinary scenery, and for the conservation of moisture, since in many western districts agriculture is impossible without water for irrigation. These reservations cover an area of almost 50,000,000 acres, a territory so large and varied that it is worthy some space in even primary geographies. There are 640 acres to the square mile—there would be then 78,125 square miles in these reservations. They cover an area much larger than the whole of New England states, three times as large as Greece, and almost five times as large as Switzerland.

The establishment of these reservations has apparently only just begun. A great park in the Appalachian Mountains and another at the head waters of the Mississippi in Minnesota will be in time established.

Already the State of New York owns a vast tract of land in the Adirondacks, and more is being purchased, for the preservation of the forests and game.

Under the circumstances, few can doubt that the subject is worthy a large place in our secondary schools and in the minds of our people.—*The School Review*.

CONCERNING NATURE.

During the past dozen years there has been a marked activity in the production of what are known as "Nature books." That the term is too comprehensive to be definite is obvious. That a certain vagueness is consistent with the state of mind in which such books are sometimes written and more often read is probably the feeling of most sane critics who have had to deal with them. And yet there are some of them of excellent purpose skillfully carried out, which deserve well of the critic and of the public. It is, therefore, the greater pity that their merits are obscured by so many others of what we shall venture to call the sentimental type.

Nature, so far as it is open to the observation of men, may be either studied or simply enjoyed; for a rather small proportion of persons it may be both. The real study of nature, however delightful to those gifted for it, is at all times an exacting and difficult process, if it is to lead to any real knowledge. It requires patience, industry, minute attention, and above all, that talent for keeping the mind open and holding theories subject to change as evidence may demand, which is the rarest, as it is among the most precious, accorded to man. Those capable of this are the corps d'élite, in any generation, of the great army more or less devoted to the same line of study. It follows that the body of observers cannot hope to attain the highest standard, but it does not follow that they cannot keep that standard in mind and pursue it to the best of their ability. Most of the books relating to the study of nature which have been introduced in the schools, in consequence of the strong movement of the past twenty years, have, on the whole, been as good as could have been expected, and the character of them has pretty steadily improved. Those used in the higher schools, and especially in the teaching of teachers, have shown much progress. Despite some almost unavoidable exceptions, the general work of the study of nature which has been so ardently carried on, has been well done, and has been fruitful and useful. The

room for most improvement is to be found in the so-called "lower" classes; but that is simply another instance of the topsy-turvy system which prevails so sadly in all our teaching and gives to the early years which are the most fertile and can be made the most profitable the least attention and the poorest service.

When we turn from the study of nature and the books that deal with it to those books that are intended mainly for those who enjoy nature, the survey is not so agreeable. Here we encounter in great number what we have termed the sentimental writers. Sentimentality is one form of vanity. It is, perhaps, the most repulsive form of that very common failing. The sentimental lover of nature is much more occupied with the beauty and fineness of his or her own sensations, real or imaginary, and with the fact that they are his, or hers, than with nature itself. It may surprise and offend some of our readers if we suggest that one of the chief sinners in this regard, and one whose great name has made him a most mischievous exemplar, was John Milton. Of nature as it is or as it is conceived by a truly sensitive mind he had but a dim and twisted notion. Of nature, for instance, as Shakespeare saw and felt it, with its myriad delicate or strong suggestions, and its intimate correspondence to the moods of the mind, he had no notion at all. He is to be pardoned, however, because he saw nature through the eyes of the classics, and used it for the scenic effect and the "business" of his intellectual drama, and did this with the skill of highly gifted and trained scholarship. But it remains true that there was pedantry and vanity in nearly all his references to nature, and that his vices are responsible for much that is offensive in modern writing.

The most distasteful trait of the sentimental school is the assumption that a strong, or strongly professed, love of nature is in itself a sort of title of literary nobility. Its possessors are a class apart. They are not easily to be understood by common people. What seem to most of us obscure and muddled ideas

and emotions are to themselves the proof of esoteric quality. They sit in their own corner, thrusting their thumbs into their private pie, and crying aloud with each newly found plum, "What a great boy am I!" Nothing could be further from the attitude of the true lover of true nature, who lives on terms of real intimacy with her, than this. If any of

our readers desire a test as to what is real and what is sentimental in the profession of love for and joy in nature, let him make himself familiar with the poetry of Shakespeare and the prose of Stevenson on the subject, and it will not be easy to deceive him.—*The New York Times: Saturday Review.*

THINGS TO SEE IN DECEMBER.

BY JULIA E. ROGERS.

Are you one of those that cower at home, sighing over faded woodlands and meadows brown and sere? There's something for you in your neighbor's wood lot, and faith, you need it!

Never mind where the paths are. Make one of your own. Shuffle your way through the drifts of leaves, all crisp and dry and brown. What a din they make!

The bluejay scolds you roundly for coming, but at heart he respects you. Not many have the hardihood to dare the silence and the cold.

What a sting there is in the gusty atmosphere! But there is a tingle in your blood by this time that answers the challenge. You catch your foot in a matted tangle of trailing yew. In falling you uncover a pocket of chestnuts hidden by some thrifty squirrel. What an exceptional flavor! And this little plant with the mottled leaf must be wintergreen! How the years fade out that separate you from the days of your youth as you nibble that leaf!

But listen! Is it a voice far off, or only the echo of a summer voice still wandering in the woods? It comes again!—the faintest little broken chirrup, and now you are sure. Off comes a strip of loose bark from the stump beside you and there is your musician—a tiny, brown cricket. Under your gaze he moves uneasily and tries to slip away into a crevice. It may be terror that he feels—probably it is bashfulness.

What a winter resort you have discov-

ered! Some borer has grooved the wood into an intricate pattern, leaving a trail of sawdust behind. In this soft bed lodges many a creature, waiting for the warmth of spring. Here is the chrysalis of a butterfly, lashed to its support with ropes of its own making. Hung all about are silken bags filled with the eggs of spiders. A yellow woolly caterpillar has spun a scanty cocoon and lies within it—a shiny, cartridge-shaped pupa. He wags his tail sleepily as you poke at him. Alongside is a relative of his, brown and black, who has gone to sleep with his clothes on! It is reverence that you feel as you fit that bark carefully into its place and bank it up with leaves. Truly our winter means not death, but only sleep!

But it's cold on the ground. You pocket a handful of chestnuts and munch them as you forge ahead. Instead of the vivid colors seen in October, there are browns and dull purples and pale yellows. They do not startle and waylay, but they do not weary you. There is a quiet restfulness in the picture—and it satisfies.

It is a joy to see the evergreens. Their time has come at last, and against a russet background they stand proudly up to be counted. You had forgotten how soft are the plumes of the white pine and how beautifully fleecy the dark green sprays of the hemlock. Can anything be more heartening to a man than the smell of their bruised twigs?

One last, best sight as you leave the woods is a fine beech tree in full leaf, with

the setting sun upon it. A touch has turned its dross to gold. It is a sight that makes the tears start!

Your neighbor has land and you have none. But he has never found anything but fuel in his wood lot. As you sit warming your hands at the fire, and pick-

ing off the burrs you brought home, you incline to feel compassionate toward him. In spite of his riches he is poor indeed. And you thank whatever gods may be for that best gift—the power to see and to feel.—*Country Life in America*. Copyright 1901, by Doubleday, Page & Co.

GOING TO SCHOOL IN A GARDEN.

Think of going to school and studying a book with a million leaves—the Book of Nature. If Mother Goose should ask some little “contrary Mary” in France “How does your garden grow?” the little lass would probably answer, “Pretty well, thank you, but teacher says I must look out for plant lice.” In the French country districts are 28,000 schools with gardens attached in which boys and girls are taught tree planting, gardening and other farm work. In Russia, the country we think so backward, there are about 8,000 such schools, where all the pupils are also taught silk-worm raising, bee-keeping, and the girls dairy work, poultry raising, cooking, sewing, nursing, and other home work. To show how important such work is considered, at the Nikitsk school in winter the pupils spend three hours a day in the school room and four or five hours in the garden. In other Russian provinces the children are given fruit trees to plant around their school houses and homes. In the Belgian public schools, the boys and girls must all study agriculture. School gardens are also common in Saxony,

Switzerland, Sweden and one province of Austria. They were first established in Sweden. The United States, England and Germany have each only one or two. There is a fine one at Dayton, O., founded by John and Frank Patterson of that city, where boys are taught gardening free.

In Europe the Government furnishes the ground and seed needed, free of charge. Each garden is divided up into little plots, one for each pupil. The teacher tends a special bed as a pattern, and then lets the youngsters cultivate their plots as they think best. They generally take pains, for they own all they raise and prizes are given for the best kept and most productive beds.

Of course all this is done with a purpose. A great many of these school children will farm for a living when they grow up, and what they learn in the gardens will make their work more interesting and more profitable and this will make the country more prosperous. Besides, the interest that the pupils take in nature study can be hitched on to their lessons in the school room.—*The Little Chronicle*.

USING THE DICTIONARY.

It is of the utmost importance that the schools teach and train children to use books, especially reference books. The impression deepens that we are going full fast enough in developing the reading habit, and at the same time the suspicion grows that we are not intensifying the appreciation of the value of the dictionary. Looking in a dictionary for the spelling of a word is not using the work, but is well-nigh abusing it. If one has no other use for it than to supplement the defects of his primary school education, he should purchase a ten-cent pocket speller and save the wear and tear on the larger work, which is a great library of reference books in itself. If one must choose between ignorance of one-fourth that is in the ordinary arithmetic, one-third of the language course, and one-half the geography, and a habit of intelligent use of the great dictionary, it is vastly better to take the latter, for this is, or ought to be, always with us.

Students must not be left to a casual undirected use of the large dictionary, but must be told how to look over all the definitions and discriminate as to the shade of meaning in the use of the word as they find it used or desire to use it.

Not one student in twenty, to state the case mildly, ever realizes how many shades of meaning a word has in the great dictionary. He needs especial and definite help as to discovering the essence of the etymology of a word as there given. Not to know how to use the etymology feature of an unabridged dictionary is to miss a prominent phase of the work. For the pupils the illustrations are as important as the etymology is to the student, and for all the many departments at the end of the book are indispensable. I have been surprised by some investigations to learn how many teachers fail to give pupils or even students any adequate idea of the resources of a great up-to-date dictionary. Fortunately, no self-respecting community leaves any school without the latest edition of the dictionary—which is far more valuable than any earlier edition. While this fulfills the responsibility of the school board, it is but the beginning of the teacher's responsibility. It is an abuse of public funds to allow a magnificent book like this to be used merely for the spelling of words or the indiscriminating defining of terms.—*Modern Methods.*

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A GRADED LIST OF POEMS AND STORIES.

This little list, which has been prepared with great care to supply partially the need of the overworked teacher, contains the names of stories and poems carefully graded and suitable for use in each of the primary grades. They are so classified, also, that it will be easy to obtain selections suitable for correlation with the other subjects of the curriculum and for use upon special occasions, such as the various national holidays, and in commemoration of events of historic interest. Many are also arranged with reference to the varying seasons of the year. (25 cents. Silver, Burdett & Co., New York and Chicago.)

BIRDS AND NATURE.—VOLUME X.

A complete set of the volumes of "Birds and Nature" is a useful and beautiful addition to any library. They are all profusely

illustrated with colored pictures from nature by the three-color process of photography. Though all are elegant, none surpass Volume X, either in the subjects selected or in the execution of the forty full-page pictures. Twenty of these are birds. Exquisite hummingbirds, bright warblers, sprightly flycatchers and pretty vireos are among the subjects chosen. The lion, tiger, camel, polar bear, elephant and zebra, with others of our well-known wild animals, are shown in their natural surroundings. One of the most valuable features of the volume, however, is a series of illustrations of our well-known gem stones in their natural condition and color. The descriptive and historical articles accompanying these gem pictures are written by Dr. Oliver Cummings Farrington, of the Field Columbian Museum.

The book is carefully edited, and the descriptive articles on each subject illustrated are instructive. Nature poetry and stories

form a pleasing feature. The volume should find a place at every home fireside and in all school libraries. (\$1.50. A. W. Mumford, Chicago.)

GRADED LITERATURE READERS.— BOOKS I-VIII.

In the Graded Literature Readers good literature has been presented as early as possible, and the classic tales and fables, to which constant allusion is made in literature and daily life, are largely used. Nature study has received due attention and the lessons on scientific subjects are carefully and accurately written. The numerous illustrations, many of them in color, will be attractive to the pupil and helpful in connection with nature study. (No. 1, 25 cents; No. 2, 40 cents; No. 3, 45 cents; No. 4, 50 cents. Maynard, Merrill & Co., New York.)

HISTORY OF THE CHRISTIAN RELIGION.—FIFTH EDITION.

This book consists of about 600 pages, is handsomely printed on heavy paper, and contains, besides a general index, table of contents, etc., a complete list of all the scriptural and ecclesiastical writers and writings of the first two centuries, arranged in chronological order. Also a list of the Roman emperors of the first two hundred years after Christ, arranged in the order of their reign. "The author, Judge C. B. Waite, of Chicago, is an able and a prominent lawyer, who for the past four years has spent the greater portion of his time in Washington, where, aided by the opportunities afforded in the National Library, he has pursued the studies which have led to the writing and publication of his remarkable work." (\$2.25. C. V. Waite & Co., Chicago.)

HERBERT SPENCER AND HIS CRITICS.

"The book is of undeniable merit, instructive and interesting. With admirable discernment the author has selected the most characteristic points of the criticisms and presents them with perfect impartiality and in the briefest form compatible with clearness." (\$1.00. C. V. Waite & Co., Chicago.)

"OUR ACCURSED SPELLING": WHAT TO DO WITH IT.

The title of this book, taken from Bulwer Lytton's characterization of English spelling, contains a whole argument in itself, an argument which intelligent people are coming to recognize, as all philologists for a generation have recognized, as unanswerable. As an educated people we endure in our spelling a burden which is literally a curse. It is a cause of immense grief and misery to childhood, of constant labor to us adults, it hinders the foreigner in our midst from mastering our language and becoming Americanized, while it is a heavy clog on the efforts of our missionaries everywhere. Custom forces us to endure the burden which becomes bearable only by dint of severe training and long suffering.

In the pages of this book, the question

which forms a part of its title is answered by Max Mueller, Dr. Wm. D. Whitney, Dr. S. S. Haldeman, Dr. F. A. March, Dr. W. T. Harris, Hon. Joseph Medill, and Dr. T. R. Lounsbury. In addition to this discussion the book contains a valuable chapter on the modifications of our alphabet recommended by the American Philological Association under the lead of that eminent scholar, Prof. W. D. Whitney, as a practical means of escape from the evils of our present spelling. A bibliography on the subject of spelling reform and a list of prominent advocates of the reform are valuable supplementary features of the work. (Paper, 25 cents; cloth, 35 cents. E. O. Vaile, Oak Park, Ill.)

OUR FIRST SCHOOL BOOK.

"Our First School Book" presents an abundance of material that should be appreciated by primary teachers who are used to exhausting the resources of half a dozen primers and their own ingenuity as well, in the effort to keep the children occupied. As a combination of primer and first reader, the book should prove sufficient for the first year's work in reading. Carrie Sivyer Ferris, the author, has in the suggestions for occupations with sticks, crayons and cardboard, provided a natural transition from the kindergarten plays. The number pictures fit naturally into the first arithmetic lessons; and there are pages that provide the starting-points for talks on birds, butterflies and other nature subjects. There are nursery rhymes to be read aloud in odd moments or given the children for memorizing. And from the first page to the last are pictures in profusion on all sorts of subjects, that may be used for language work or for story-telling by teacher and pupil. Thus are the different lines of work in the first school year co-ordinated. The reading matter takes the form of a story even on the first pages, where the sentences must needs be limited to very few words repeated often enough to fix them in the child's mind.

By reason of its simple, bright stories and its attractive pictures, "Our First School Book" is distinctively a book to delight the children. It deserves a place not only in the school-room, but in every family where there are small children to be read to and amused. (30 cents. Silver, Burdett & Co., New York and Chicago.)

PESTALOZZI.

This work on Pestalozzi and the Foundation of the Modern Elementary School, by A. Pinloche, is one of a series of works on "The Great Educators," edited by Dr. Nicholas Murray Butler. It may be said that before the time of Pestalozzi popular education did not exist. Even in Germany, where statesmen gave the subject much thought and attention, it was far from existing in reality. "Luther had certainly proclaimed the need of it, but the elementary school, which he really created, had for a long time been a mere class for the teaching of the Catechism." The name of Pestalozzi is so frequently spoken and his writings so often quoted this work will be

valuable and interesting to all engaged in educational work. For we cannot justly or fully appreciate the work of a man who was at the same time a practical worker as well as a theorist on education unless we know his life and his writings. (\$1.00. Charles Scribner's Sons, New York.)

THE ARNOLD PRIMER.

The natural outgrowth of careful observation and wide experience, this Primer is distinctively *made for children*. Miss Sarah Louise Arnold has happily provided reading material which is at the same time attractive to the child and well calculated to assist in his mental development. The vocabulary is the simple, natural, typical vocabulary of a child, and is fixed by frequent and natural repetition. Phonics are treated simply, and in their proper relation. In illustrating the book, both author and publishers have kept carefully in mind throughout the adaptation of the

pictures to the text and text to pictures, each supplementing and complementing the other. The scientific accuracy of these illustrations, in color and black-and-white, the unique and effective use of photographs, and the perfect harmony of the illustrations as a whole, make this Primer a decided step in advance of all its predecessors.

The Arnold Primer is adapted to the ordinary teacher with the ordinary class. No special equipment is required of either, and as good results can be obtained from its use in small country schools as in the best city institutions. (25 cents. Silver, Burdett & Co., New York and Chicago.)

THE KING OF THE GOLDEN RIVER.

This work, by John Ruskin, has been edited for the children of America by Eloise McVay, and forms No. 226 of a series of classics. (10 cents. Educational Publishing Company, New York and Chicago.)

Educational Articles in the December Magazines.

- "The Government of our Insular Possessions," Arthur W. Dunn *American Review of Reviews*
 "Expansion Through Reciprocity," John Ball Osborne *Atlantic Monthly*
 "Literature and the Civil War," Henry A. Beers *Atlantic Monthly*
 "Christian Leadership and Economic Reform," J. Buckley Bartlett *The Arena*
 "Evolution and Theology," Walter Spence *The Arena*
 "Anarchism in Literature," Lionel Strachey *The Critic*
 "A Calm View of Reciprocity," George B. Waldron *The Chautauquan*
 "Formative Incidents in American Diplomacy," Edwin Earl Sparks *The Chautauquan*
 "The Inner Life of Leonardo da Vinci," Adelia A. Field Johnston *The Chautauquan*
 "Ethics of the Last China War," Gilbert Reid *The Forum*
 "Reciprocity and Foreign Trade," E. J. Gibson *The Forum*
 "The United States Consular Service," Charles Truax *The Forum*
 "The Education of a Child—III," Edward Howard Griggs *Ladies' Home Journal*
 "The Baby from Birth to Three," Emelyn L. Coolidge, M. D. *Ladies' Home Journal*
 "The Child of Three and Over," Elizabeth Robinson Scovil *Ladies' Home Journal*
 "Physical Training for Women," J. V. Gilman *Outing*
 "Prevention of Presidential Assassinations," General Lew Wallace *North American Review*
 "The Need of National Legislation Against Anarchism," Senator J. C. Burrows *North American Review*
 "International Control of Anarchists," The Duke of Arcos *North American Review*
 "America Should Establish Universal Peace," Prince Yo Yun Chun *Success*
 "The Makers of Modern Germany," Fritz Morris *Metropolitan Magazine*

Beautiful Pictures. Catchy Verse

The Jingle Book of Birds

By EDWARD B. CLARK

16 Colored Plates

Price 60 Cents

This book is for both Children and the elders. The
lines are not jingles merely but jingles which have
a well rounded purpose and much of pith and point.
The color scheme of the cover is strikingly beautiful.
This book will make an appropriate Christmas gift.

Read what the Chicago Record-Herald critic says of the book :

"The Jingle Book of Birds," by Edward B. Clark, has the triple merit of being handsome, clever and reliable. Mr. Clark is one of the most thorough and enthusiastic ornithologists in Chicago, and has for years been a contributor to magazines and to the local press on the subject of birds. Instead of writing the customary "alphabet" he has preferred to be guided by the real nature of the birds, rather than by the letter with which each name begins, and has treated only those birds of which something pointed could be said. There are sixteen spirited "jingles" and the same number of full-page colored illustrations of typical birds, the pictures being unusually fine examples of three-color work. The book is an excellent one to put in the hands of children. Here is an example of Mr. Clark's jingles, taken from the one devoted to "the bluejay, a rascally thief," which closes thus:

It is queer how the people have made it a rule
That to call a man "jay" is to call him a fool,
For if they believe that the jay is a dunce
They'll find themselves fooled if they try him just once."

—Chicago Record-Herald, Nov. 23, 1901.

The Chicago Evening Journal says, after quoting from the jingles as length:

"Sixteen beautiful illustrations in colors—magnificent full-page picture—show the varied and wonderful plumage of some of Mr. Clark's feathered friends. Opposite each picture is a descriptive verse in big type. For children or young folks, or even for adults. 'The Jingle Book of Birds' is a very pretty possession. Mr. Clark deserves to be complimented on producing such a dainty and pleasing volume."

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago,

GREAT BARGAINS IN MAGAZINE CLUBS.

\$13.00 worth for only \$6.00

By special arrangement we are able to offer the Greatest Clubbing Bargains of the Season. THE MAGAZINES WILL BE SENT TO ONE OR DIFFERENT ADDRESSES.

BIRDS AND NATURE, 1 year	\$1.50	} \$13.00 worth. SEND US ONLY \$6.00 FOR ALL FIVE.
REVIEW OF REVIEWS (new), 1 year	2.50	
CURRENT LITERATURE (new), 1 year	3.00	
NORTH AMERICAN REVIEW (new), 1 year	5.00	
REVIEW OF EDUCATION, 1 year	1.00	

In place of REVIEW OF REVIEWS you can have NEW ENGLAND MAGAZINE.
In place of NORTH AMERICAN REVIEW you can have LESLIE'S WEEKLY.

Twelve More Great Offers. (The Club Price Pays for a Yearly Subscription to Each Periodical.)

Regular Price.		Club Price
\$12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, Current Literature (new), Success	\$6.25
11.00	Birds and Nature, Review of Reviews (new), New England Magazine, Current Literature (new), Success	5.50
12.00	Birds and Nature, Review of Reviews (new), Leslie's Weekly, New England Magazine, Success	6.25
12.50	Birds and Nature, Current Literature (new), Leslie's Weekly, New England Magazine, Success	6.25
6.00	Birds and Nature, Review of Reviews (new), Cosmopolitan, Success	4.00
6.50	Birds and Nature, New England Magazine, Success, Cosmopolitan	4.00
10.00	Birds and Nature, Leslie's Weekly, Review of Reviews (new), Success, Cosmopolitan	5.75
8.50	Birds and Nature, Leslie's Weekly, Success, Cosmopolitan, Leslie's Monthly	5.25
6.50	Birds and Nature, Leslie's Weekly, Success	4.25
5.50	Birds and Nature, Success, Cosmopolitan, Leslie's Monthly, Household	4.00
3.50	Birds and Nature, Success, Cosmopolitan	2.75
3.50	Birds and Nature, Success, Household	2.75

In place of Cosmopolitan and Leslie's Monthly in any of our offers we can send you Good Housekeeping, Designer, Ledger Monthly, Household, Pilgrim, American Mother, Recreation (new), Popular Science News (new), or Home Magazine of New York. If you are now a subscriber to Review of Reviews and wish to accept these liberal offers, you can add \$1.00 to the price of the combination. This will apply to Current Literature also.

Remember the Magazines will be sent to one or different addresses. The subscriptions may be either new or renewals, except those to Review of Reviews, Current Literature, North American Review, Recreation and Popular Science News, which must be new subscriptions.

Make Remittances and Address All Orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago.

THIS IS THE MOST GENEROUS OFFER EVER MADE BY AN EDUCATIONAL PAPER.

SCHOOL ROOM METHODS AND NATURE STUDY. Three Numbers. Each 25c.

Contents of Volume I. are given only in a general way. Those of 2 and 3 in detail. Each volume is profusely illustrated. Money refunded to anyone who is not satisfied.

CONTENTS OF NUMBER I.

Books helpful in Nature Study—Symposium on Nature Study—Pedagogic Aspects of Nature Study—Nature Study and the Teacher—The Outdoor Study of Geography—Plant Study—Seeds and Their Germination—The Study of Leaves—Flowers and Their Work.

The Study of Trees.

A Dozen Common Birds, Bird Study, Olive Thorne Miller.

Bird Day and Birds, John Burroughs; Our Common Insects—How to Study Their Life History and Habits (Illustrations for this article and the one on Mammals furnished by Prof. Lugger, most of them from his own drawings).—Selections from Literature to Accompany Nature Lesson, Sarah L. Arnold.

CONTENTS OF NUMBER II.

LESSONS AND EXERCISES FOR SEASONS.—Suggestions for Christmas Program—Christmas Bells—December in the Primary Room—Christmas History and Customs—Legend of the Chrysanthemum—In the Lands of Ice and Snow—in Esquimaux Land—Valentine's Day—Lincoln Exercises—Hour With Washington—Patriotic Day Program—Arbor Day Exercises—Trees and Their Uses—Growth and Structure of Trees—Arbor Day Program—Memorial Day—Stars and Stripes—Flag Raising Exercise—Balch's Salute to the Flag—Flag Raising Days—Outline of Bird Study—Flag Day Exercise.

NATURE AND CORRELATED WORK.—An Ingenious Contrivance—Cabbage Butterfly—Some Common Butterflies—Course of Study (Sarah C. Brooks)—Gentians (Correlated Lesson)—Outline for Correlated Work—Bird Life in Winter—Reading Lesson (1st grade) The Woodpecker—Related Lessons on the Sun—Study of Leaves and Birds—Observation of Trees—Report of a Field Lesson.

GEOGRAPHY—Study of a Brook Basin—A Field Lesson with Little Children—Mediterranean Cruise.

MISCELLANEOUS—A Word to Country Teachers—Art in School—Trials and Beauties of Winter—Aeolian Harp—Learning School Songs.

POETRY—God Bless Our Fatherland—Abraham Lincoln—The Nation's Sorrow—Washington—Hall Columbia—Birthday of Washington—God Save the Queen—Concord Hymn—Selection from Bryant—Twenty Miles Away—Ratsdon—John Henry Jones—Little Maid's Reply—Yankee Doodle—To Lincoln—Ode to Ethiopia—Patriot's Remembrance—Decoration Day—Starry Flag—Memory's Wreath—Our Country—owers for the Brave—Rest in Peace—An Offering to the Soldier—The Deserted Plantation.

BIRDS AND INSECTS—Cats' Claws, Who Has Counted Them—Jackdaw—Mrs. Wasp and Mrs. Bee—Crickets' Ball—How the Woodpecker Knows—Legend of the Birds—The Robins Sing in the Rain—Bob White—A Bird's Nest—Throstle—The Rabbit, The Lion, The Cat—The Tradesmen—Birds of Spring—The Jay—The Song of the Bee—The Butterfly—The Dead Pussy Cat.

FLOWERS AND PLANTS—Gentian—Fringed Gentian—Milkweed Pod—Golden Rod—Seed Cradles—How the Leaves Came Down—Corn—October Woods—Little Aster Service—Chrysanthemums—Flowers in the Window Sill—Buttercups and Daisies—Pussy Willow—Pussy Willow—The Alder Catkin—Leaves and Flowers—The Little Plant—Daisies—How Marigolds Happened To Be—Lilacs—Two Trains to Poppy Land—Old Fashioned Roses—Butterflies and Flowers—My Strawberry.

NATURE—Raindrops—The Bonny Bicycle—A Bowl of Honey—River Song—Suppose—The Sunbeam—Butterfly and Thistle Ball—Little Drops of Water—Long Ago—Talking in Their Sleep—The Wind—The Wind—Joy for the Sturdy Trees—Forty Years from Now—In the Swing—Which Tree is Best—Discontented—Maple Tree—Whispering Pine—Planting the Tree—Tree Party—The Oak—Wayside Inn—Horse Chestnut—Plant the Apple Tree—Then It's Spring—The Cottonwood Tree—Little Brook—Little Snowflakes—Little Things—Waterproof Folks—The Heart of a Tree—The Critic—Plum Tree Dancers.

EXERCISES AND POEMS FOR SEASONS—Harvest Exercise—Autumn—Autumn Song—Autumn—November—Down to Sleep—Thanksgiving—A Sober Month—Harvest Hymn—Thanksgiving, The Reason Why, Dot's Thanksgiving, Praise God, Little Paul's Thanksgiving, All Things Beautiful, We Thank Thee, Signs of Thanksgiving, Thanksgiving—Little Jack Frost—Landing of the Pilgrims.

CHRISTMAS POETRY—Yule Tide—Christmas Tree—God Rest Ye—Christmas Stockings—Santa Claus' Petition—Little Town of Bethlehem—Bird's Christmas—A Feel in Christmas Air—Christmas Carol—Hang up the Children's Stockings—Address to Santa Claus—Old Santa Claus in His Den—Snow Fairies—The Two Brothers—What the Winter Brings—Christmas Bells—Christmas Hymn—Children's Friend—Charity—A Christmas Secret—Christmas Carol—In Bethlehem of Judea—Old Janus—Winter for Boys—Patriotic Exercise—Between Winter and Spring—Spring Cleaning—Return of Spring—When the Green Gets Back on the Trees—April Days—The Months of Folly—Decoration Day—Memorial Day for Wee Ones—Memorial Flowers—Praise June—Emile's Thoughts—Thanksgiving—Snow—Jolly Old Winter—Sunshine—The Months.

MUSIC—Norwegian National Hymn—Swedish National Hymn—Bruce's Address—Battle Prayer—The Marseillaise—Good Morning—Salute to the Flag—Scale Studies—We Have Been Wandering—A Spring Song—Till We Meet Again—We Thank Thee—Sunbeams—In Merry Autumn Time—Lullaby and Good-night—Fairland—The Swallow and the Sparrow—Christmas Song—Thanksgiving—Flowers That Bloom—Trees in Winter—Air Fairies—Little Gardener—Good Morning—Bring Forth the Flowers—Vapor Song—Swallows—East Wind—The Good Die Not—Lullaby—Parting Song.

CONTENTS OF NUMBER III.

JANUARY—Solution and Crystallisation; The Eskimo; Lesson on Coal and Mining—Dr. Burroughs' Method—Kindergarten in Primary Room—Only To-day—Happy New Year; Don't Give Up; Winter Song; Procession of the Months; The New Year; What the Coal Says—Bed in Summer; A Useful Gift; A Norse Lullaby (a song); The Little Fir Trees; A Vain Regret; To the New Year—Illustrated Poem—The Pine Tree—Music of the Pines—Miriam (a story of a child).

FEBRUARY—A Boy's Remonstrance (poem)—Hurrah for the Flag (poem)—Meeting Washington (an anecdote)—Mount Vernon (poem)—The Study of Washington—Tributes to Washington—Exercise for Washington's Birthday—A Lincoln Program—The Bravest Battle (poem)—Memory Gems—Decorations and Programs—Patriotism for the Little Ones—Noted Birthdays in February—Washington Memorial Exercise—Dialogues—The Little Maid's Reply—Saint Valentine's Day—February (poem)—Paper Making—Birthdays—Something About Lowell—Memory Gems from Lowell.

MARCH—Classification in Country Schools—Memory Gem from Whittier—With the North Wind—Poetry, March; March; Mrs. Red Squirrel; Gaining Wings; Memory Gem from Clarence Urmey—Spring Lessons on Flowers—Program for One Week Spring Term—Poetry, Pussy Willow; One, Two, Three (a march song); Finding Fault; What Was It? Which One?

APRIL—Tree Planting (poem)—Arbor Day Thoughts—Arbor Day with Little Folks—An Arbor Day Collection—Arbor Day Exercises—The Oaks—The Lonely Pine Tree (story)—For Arbor Day (poetry), Planting Trees; The Tendril's Faith; An Arbor Day Tree; The Raindrops; Memory Gems from Smith and Cary; Planting a Cherry Tree—At Happy Easter Time—School Gardens—Escape at Bedtime (poem)—Memory Gems from Lowell.

MAY—A May Day Program—Program for Decoration Day—Quotations from Lowell—The Grand Advance (poem)—For Lincoln—Poetry, Lincoln's Favorite; Barbara Frietchie; The Flag; Great Men, Washington; George Washington—Patriotism—Flag Facts—Properties of Our Flag—The American Flag—Memory Gems—Poetry, Band of Mercy Hymn; A New Year; The Little Philanthropists—Correlated Lessons—Exercises in Sense Training—A Little Girl's Wonder (poem)—Memory Gem—An Afternoon with the Birds—Poetry, In the Orchard; My Strawberry; The Quickening of the Spring; Flower Song (music); The Malden and the Blue Bird; May Day; In Apple Tree Town; "A million little diamonds"; Memory Gem—Analysis of Bird Gems—Why Some Birds Hop and Others Walk—An Eye to the Birds—The Coyote and the Woodpecker—Foreign Lands (poem)—A Queer Bird (poem)—My Serenade (poem).

SEPTEMBER—September—Our New Teacher—First Day in Primary Room—Days of the Week—Jean Ingelow—Your Own Geography—Review Days—God Give Us Men—"Ill fares the land"—Common School Examinations.

OCTOBER—A Letter to Mother Nature—The Autumn Jewel—A Study of Columbus—At the Sign of the Goldenrod—A Walk with a Naturalist—Grasshopper Music and Verse—Little Bird, Little Bird.

NOVEMBER—Thanksgiving (Illustrated)—Jack O'Lantern; A "Bird's-Eye" View—Harvest Is Come; Thanksgiving—Thanksgiving; Thanksgiving Letter; The Cricket Fiddler; Eugene Field; Bedtime; The Bill of Fare—November Lessons: Lesson on the Squirrel; Lessons on Nuts; Lesson on Indians; Oral Number Work—Oral Number Work—Patriotic Thanksgiving Exercise—A Strange Plant—A Thanksgiving Hymn; Smile a Little; Memory Gems—Kindergarten Occupations in the Primary Room—November memory gems—A Talk on the Seed—Literature in the Primary Room—Hints on Map Making.

DECEMBER—Christmas Tributes from the nations—An Eastern Legend; To Prevent a Mistake; Christmas Joy; Where? A Christmas Eve Thought; Santa Claus—Beautiful Snow; Good Night—A Christmas Turkey (story)—The Bird's Christmas Dinner (story)—The Little Christmas Tree (poem)—Imitation Japanese (poem)—The Stockings (poem)—Piccola (a story)—Memory gems—Whittier Memorial; For Primary Grades—For Grammar Grades—A Whittier Exercise—Wordsworth's Attitude Toward Children—Memory gems—Norse Mythology—Australian Poetry; My Jack Frost; "New occasions teach new duties".

MISCELLANEOUS—Catkins (poem)—Use of Chalk in the Schoolroom—March, April, May—The Little White One; The Starry Skies; October; November; December; January; February; March; April; May—Our Common Cereals: Wheat, Rye, Barley—Poetry; Don't Give Up; Robert of Lincoln; One, Two, Three; Springtime Summons; To the Dandelion

PRIMARY SCHOOL LEAFLETS.

Volume I. The Sun, Phœton, The Snow.—Our Flag, The Boy Washington, The Man Washington, Joan of Arc.—Winds.—Spring, Pussy Willow, Rain, Dandelion, Little Brown Seed.—Little Dandelion, What the Flowers Wished, The Violet, Anemone.—The Frog, Snail, Crayfish.—September Aster, Goldenrod.—Milkweed, Thistle, Ants, October.—The Mayflower, New Land, Fruit, Thanksgiving Squirrel.—The Madonna, The Stars and the Child, The Christmas Story.

Volume II. The Snowflake Fairies, The Snow, A Trip to Cloudland, The Star.—Abraham Lincoln.—The Little Hiawatha.—Hiawatha's Canoe, The Cary Tree.—More About the Cary Tree, The Young Soldier, Take Care, The Drummer-Boy's Burial, The Red and White Roses.—Story of Little Caterpillar, Caterpillar and Robin Redbreast, Sleepy Little Caterpillar, Little Butterfly.—The Ants and the Grasshopper, The Pea Blossom.—The Three Bears, The Pea Blossom concluded.—The Lion and the Mouse, Why Chipmunks Have Stripes.—The Christmas Bells.

Volume 2½. Little Red Riding-Hood and picture.—Little Cedric, adapted from In Storyland (illustrated).—King Aeolus and the Bag of Winds.—The Easter Hare.—A Little Morning-Glory Seed.—Clytie (illustrated): The First Dandelion.

Volume III. The Seedlings, Thistle Song, Goldenrod, The Apple Tree, The Milkweed.—Going Away, Little Jack Frost, The Grapes, The Anxious Leaf.—What the Squirrel Said, The Flowers' Sleep, The Pumpkin, How Pattv Gave Thanks.—What the Christmas Tree Said, The Stars, The Birds' Christmas.—The New Year, The Snowflakes, In Eskimo-Land.—Old Abe, The Snow Man.—March, Spring and Her Helpers, A Windy Story.—The Easter Lily, Tree Talk.—The Violet, The Thirtieth of May.—The Bees, The Dandelion's Birthday.

Volume IV. Quadrupeds, Called Fourpaws. It is a gem. It was edited by Nellie Walton Ford, author of "Nature's Byways." It treats, the Cat, Squirrel, the Fox, Lamb, Bear, Deer, Rabbit, Cow, Horse, Dog.

SPECIAL OFFER.

School Room Methods and Nature Study, 3 volumes, each 25c.....	\$.75
Primary School Leaflets, volumes 1, 2, 2½, 3 and 4.....	.45
Review of Education, 10 numbers.....	1.00
Total.....	\$2.25

All for \$1.50

**YOU CAN'T AFFORD TO MISS THIS
VERY SPECIAL OFFER.**

A. W. Mumford, Publisher,
203 MICHIGAN AVENUE, — — CHICAGO.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price : Two cents each assorted as desired; the 456 for only \$4.56; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,

- 1 Nonpareil.
- 2 Resplendent Trogon.
- 3 Mandarin Duck.
- 4 Golden Pheasant.
- 5 Australian Parrakeet.
- 6 Cock of the Rock.
- 7 Red Bird of Paradise.
- 8 Yellow-throated Toucan.
- 9 Red-rumped Tanager.
- 10 Golden Oriole.
- 11 American Blue Jay.
- 12 Swallow-tailed Indian Roller.
- 13 Red-headed Woodpecker.
- 14 Mexican Mot Mot.
- 15 King Parrot.
- 16 American Robin.
- 17 American Kingfisher.
- 18 Blue-mountain Lory.
- 19 Red-winged Blackbird.
- 20 Cardinal, or Red Bird.
- 21 Bluebird.
- 22 Barn Swallow.
- 23 Brown Thrasher.
- 24 Japan Pheasant.
- 25 Bobolink.
- 26 American Crow.
- 27 Flicker.
- 28 Black Tern.
- 29 Meadow Lark.
- 30 Great Horned Owl.
- 31 Rose breasted Grosbeak.
- 32 Canada Jay.
- 33 Purple Gallinule.
- 34 Smith's Longspur.
- 35 American Red Crossbills.
- 36 California Woodpecker.
- 37 Pied-billed Grebe.
- 38 Bohemian Waxwing.
- 39 Long-billed Marsh Wren.
- 40 Arizona Jay.
- 41 Screech Owl.
- 42 Orchard Oriole.
- 43 Marsh Hawk.
- 44 Scissor-tailed Flycatcher.
- 45 Black-capped Chickadee.
- 46 Prothonotary Warbler.
- 47 Indigo Bird.
- 48 Night Hawk.
- 49 Wood Thrush.
- 50 Catbird.
- 51 Yellow-throated Vireo.

- 52 American Mockingbird.
- 53 Black-crowned Night Heron.
- 54 Ring-billed Gull.
- 55 Logger-head Shrike.
- 56 Baltimore Oriole.
- 57 Snowy Owl.
- 58 Scarlet Tanager.
- 59 Ruffed Grouse.
- 60 Black and White Creeping Warbler.
- 61 American Bald Eagle.
- 62 Ring Plover.
- 63 Mallard Duck.
- 64 American Avocet.
- 65 Canvas-back Duck.
- 66 Wood Duck.
- 67 Anhinga, or Snake Bird.
- 68 American Woodcock.
- 69 White-winged Scoter.
- 70 Snowy Heron, or Little Egret.
- 71 Osprey.
- 72 Sora Rail.
- 73 Kentucky Warbler.
- 74 Red-breasted Merganser.
- 75 Yellow Legs.
- 76 Skylark.
- 77 Wilson's Phalarope.
- 78 Evening Grosbeak.
- 79 Turkey Vulture.
- 80 Gambel's Partridge.
- 81 Summer Yellow Bird.
- 82 Hermit Thrush.
- 83 Song Sparrow.
- 84 Yellow-billed Cuckoo.
- 85 Ruby-throated Hummingbird.
- 86 House Wren.
- 87 Phoebe.
- 88 Ruby-crowned Kinglet.
- 89 Mourning Dove.
- 90 White-breasted Nuthatch.
- 91 Blackburnian Warbler.
- 92 Gold Finch.
- 93 Chimney Swift.
- 94 Horned Lark.
- 95 Yellow-bellied Sapsucker.
- 96 Warbling Vireo.
- 97 Wood Pewee.
- 98 Snow Bunting.
- 99 Junco.
- 100 Kingbird.
- 101 Summer Tanager.

- 102 White-fronted Goose.
- 103 Turnstone.
- 104 Belted Piping Plover.
- 105 Wild Turkey.
- 106 Cerulean Warbler.
- 107 Yellow-billed Tropic Bird.
- 108 European Kingfisher.
- 109 Vermillion Flycatcher.
- 110 Lazuli Bunting.
- 111 Mountain Bluebird.
- 112 English Sparrow.
- 113 Allen's Hummingbird.
- 114 Green-winged Teal.
- 115 Black Grouse.
- 116 Flamingo.
- 117 Verdin.
- 118 Bronzed Grackle.
- 119 Ring-necked Pheasant.
- 120 Yellow-breasted Chat.
- 121 Crowned Pigeon.
- 122 Red-eyed Vireo.
- 123 Fox Sparrow.
- 124 Bob-white.
- 125 Passenger Pigeon.
- 126 Short-eared Owl.
- 127 Rose Cockatoo.
- 128 Mountain Partridge.
- 129 Least Bittern.
- 130 Bald Pate Duck.
- 131 Purple Finch.
- 132 Red-bellied Woodpecker.
- 133 Sawwhet Owl.
- 134 Black Swan.
- 135 Snowy Plover.
- 136 Lesser Prairie Hen
- 137 Black Duck.
- 138 Wilson's Petrel.
- 139 Blue-Gray Gnatcatcher.
- 140 American Coot.
- 141 Ivory-billed Woodpecker.
- 142 American Sparrow Hawk.
- 143 Silver Pheasant.
- 144 Scaled Partridge.
- 145 Ovenbird.
- 146 American Three-toed Wood pecker.
- 147 Bartramian Sandpiper.
- 148 Nightingale.
- 149 Roseate Spoonbill.
- 150 Dickcissel.

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grape.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairly-tailed Mole.
- 256 Cineraria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quinine.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany—(Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 { New England Aster.
Late Purple Aster.
- 348 Wild Yellow Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 { Fringed Gentian.
Closed or Blind Gentian.
- 355 { Tall or Giant Sunflower.
Black-eyed Susan or Oxyeye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowls.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-duck.
- 372 Red-breasted Sapsucker.
- 373 Prometheus and Sceloporus Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinnamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Murrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel.
Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein.
Moth Mullein.
- 424 Medicinal Plant: Cocoa Fruit.

BARGAINS IN CHRISTMAS CARDS.



CHRISTMAS NOVELTIES.—We have bought the entire line of these goods held by one of the largest importing houses in the United States, at a fraction of their regular cost, and we propose to give our customers the benefit by selling these elegant Novelties at a fraction of their usual retail price. They are beautiful folders, lithographed in Germany, embossed and cut out, printed on the inside page with an appropriate Christmas verse or greeting, and are highly artistic in every respect. The illustration shows but one of the scores of beautiful designs in the assortment. A very few have a number marked on the back with lead pencil, but nearly all of them have no mark whatever. As we have an immense stock of them we have decided to cut the price to

3 cents each.

ASSORTMENT A.—About $3\frac{1}{2} \times 5\frac{1}{2}$, embossed, all bright designs, 80 cents per 100.

ASSORTMENT C.—About $4\frac{1}{2} \times 6$, many embossed, others fine imported, large variety of designs, suitable for all grades, $1\frac{1}{2}$ cents each.

ASSORTMENT F.—Twelve designs, $5\frac{1}{2} \times 7\frac{1}{2}$, embossed and cut out edges, scenery and flowers, $2\frac{1}{2}$ cents each.

ASSORTMENT G.— $5\frac{1}{2} \times 7\frac{1}{2}$, embossed and cut out, 3 cents each.

ASSORTMENT H.—About 7×9 , embossed and cut out, entirely new designs in this assortment, elegant heavy art panels, usually sold at 5c. or 6c. each. 4 cents each.

SAMPLES.—Samples of any of our goods will be sent at the prices quoted—none free. Samples are marked on the back with pencil so the marks can be erased and the cards used.

DISCOUNT.—We will send \$1.20 worth of the above goods for each \$1.00 sent us, or \$5.00 worth for \$4.00. All goods sent by mail, postpaid. Cash must accompany every order.

ASSORTMENT K.— 7×11 , six entirely new designs, embossed and cut out, usually sold at 8c. each. 6 cents each.

ASSORTMENT M.— 9×11 , embossed and cut out, our largest art panels, 8 entirely new designs and a few of our best last season's designs, sold by other dealers at 10c. each. 8 cents each.

BOOKLETS.—We have an elegant line of imported booklets, made by the best lithographing establishments in Germany. They are the finest goods in the market and make splendid gifts for last day of school. Some are especially for Christmas and some are appropriate for any time of year. State which you prefer. The prices are 5c., 10c., 15c., 20c. and 25c. each. Send us an order and we will make a careful selection. Samples will be sent at prices quoted above.

Headquarters for all kinds of Cards and Merits.

JOHN WILCOX. Box 823, Milford, New York.

OF BIRDS OF LAKESIDE AND PRAIRIE, \$1.00.

MY DEAR SIR:

After having read your late book entitled "Birds of Lakeside and Prairie," I am convinced that it will have a large sale because you have succeeded in making indirectly a strong, sympathetic appeal to humanity in a most charming manner for the preservation of the feathered tribes. For this reason your work forms the very best working tool for all societies organized for the protection of birds, because the gentle, persuasive style of your writing will produce better and more permanent results in missionary work than all the laws enacted for that purpose.

Chicago, Dec. 9, 1901.

ALEXANDER J. RUDOLPH,

Asst. Librarian Newberry Library.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—E. E. McIntire, Superintendent of Schools.

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN & TEACHERS' AGENCY.

The South and West offer better advantages to aspiring teachers than any other section. THE SOUTHWESTERN TEACHERS

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to
CLAUD J. BELL, Proprietor.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these :

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man — what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. THE REVIEW OF EDUCATION contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. THE REVIEW OF EDUCATION does not seek to compete with its contemporaries, but rather to supplement them all.
2. **N. E. JOURNAL OF EDUCATION;**
Weekly; \$2.50 a year.
Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monroe, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.
3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**
Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.
4. **MODERN METHODS; \$1.00 a year.**
Our New Monthly.
The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.
5. **THE SCHOOL BULLETIN; \$1.00 a year.**
THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

A NEW BOOK OF GERMAN LEGENDS

Told for the Children

The marvelous German legends which are the themes of so many of the Wagner Operas have never been told in a more fascinating manner for both young and old than in

THE WAGNER OPERA STORIES

BY GRACE EDSON BARBER.

ELIZABETH HARRISON, of the Chicago Kindergarten College, writes the introduction to this book. She says: "I know of no finer illustration of how to handle the great myth-treasures of the race than that shown by Miss Barber in the simple retelling of some of the old legends which finally culminated by setting the soul of Richard Wagner on fire."

This book was issued early in June, and is illustrated with beautiful half-tone pictures, printed on heavy paper with extra wide margins and daintily bound in cloth.

It is a beautiful gift book for Christmas. Price 50 cents.

Send for Our Catalogue of Books for Children.

Send for Our Catalogue of Books for Teachers.

Send for a sample copy of **SCHOOL AND HOME EDUCATION**, (formerly Public School Journal). Edited by George P. Brown. \$1.25 a year. The foremost journal for thinking teachers in this country.

Public School Publishing Company.

Bloomington, Illinois.

OF BIRD LORE IN JINGLES. 60 Cents.

"Bird Jingles," by Edward B. Clark, is a picture book which may be particularly commended for its excellent colored pictures of birds which have evidently been photographed from life. A word of introduction explains that only those birds were selected whose traits or names lent themselves readily to the giving of some point to the descriptive verse. Let the rhythmic verse speak for itself. It has a moral truly, but are we training the ears of future poets?

Drop a tear for the Herons, whose feathers are snowy,
For woman has found that for bonnets they're showy;
And so when she goes to the milliner's mart,
At the bat of fashion she hardens her heart.
Nesting herons are slain with no pang of regret,
To make certain lady may wear her aigrette,
May haunted she be till she draws her last breath,
With the cries of bird babes slowly starving to death.

However, the fine sketches will teach the little ones to recognize woodpeckers, magpies, brown thrashers, house wrens, shrikes and whip-poor-wills, and so this Christmas book has a mission.—*From Chicago Post.*



**THE SMITH PREMIER
OCCUPIES AN
IMPERISHABLE POSITION
IN THE BUSINESS WORLD.**

Unquestioned superior merit annually adds thousands of names to the long list of Smith Premier users, representing every line of trade and every profession. It is held in lasting regard at home and abroad.

ILLUSTRATED CATALOGUE FREE.

The Smith Premier Typewriter Co.

115 Clark Street, Chicago, Ills.

NEW HISTORICAL PUBLICATIONS

THE JOURNAL PUBLISHING COMPANY

MERIDEN, - CONN.

The following Historical Publications are of great value as reference books in Libraries or to those interested in the early development of the country aside from their genealogical worth.

The Wakeman Genealogy.—A volume of over 450 pages, containing more than 40 illustrations, fully indexed. Is a history of the Wakeman family in England and America, and more particularly of John Wakeman, the first treasurer of New Haven Colony. Contains much valuable historical matter of and following the founding of New Haven Colony.

The index contains the names of 900 allied families.
Full Cloth, Gold Stamped, - \$5.00.

The Atwater Genealogy.—Pertains to more than 800 years of English and American history, and goes as far as possible into the lives and actions of the men and women concerned. Is an elaborate and fully indexed volume of about 500 pages, fully illustrated and handsomely bound.

Full Cloth, Gold Stamped. - \$5.00.

History of Plymouth, Conn.—A history of one of the oldest Connecticut towns and particularly interesting because it was the home of the inventors of the first clocks and cabinet locks. Contains biographical sketches of nearly all the first inhabitants and those who became prominent in public life. Finely illustrated.

Full Cloth. - \$3.00.

History of Kent, Conn.—Is a volume of unusual interest. Contains history of the Scatacock Indians, one of the last tribes to inhabit Connecticut. Filled with historical data, the part its inhabitants took in the Revolutionary war. Illustrated.

Full Cloth - \$3.00.

NOW IN PRESS

A REPRINT OF THE HISTORY OF NEW HAVEN COLONY,

By REV. EDWARD ELIAS ATWATER.

Now out of print. The original copies command many times their value and cannot be obtained except in rare instances. The work is recognized as the most complete and authoritative History of New Haven Colony, and the only complete one ever published. The matter to be added to this book will so greatly enhance its value that owners of the first edition will find this new edition well worth purchasing. It will consist of lists of Officers in the various Militia Companies up to 1775; Members of the Assembly; Officers and Men who served in the Revolutionary War, and Maps of the town at different periods for 150 years, giving the names of the residents or owners of the houses at the time they were issued. This new edition of the history will consist of from 600 to 700 pages. Advance orders now being received. Price, postpaid, \$4.00.

THE JOURNAL PUBLISHING CO.,
MERIDEN, CONN.

HOLIDAY SONGS

AND EVERY-DAY SONGS AND GAMES,

By Emilie Poulsson.

Profusely illustrated by L. J. Bridgman.

This book has been long in preparation and is published at great expense, but we expect for it a warm welcome on account of the reputation of Miss Poulsson and a permanent popularity on account of its intrinsic merits.

Attractive cloth cover, price, \$2.00.

RAPHIA AND REED

WEAVING

By Elizabeth Sanborn Knapp.

The book will contain, also, a course in paper and cardboard construction and another course in free weaving with strips of cover paper of contrasting colors.

The raphia and reed work will be unique and of great help to all who are looking for something new and attractive for the lower grades.

Bound in cloth, price, 50 cents.

MILTON BRADLEY CO., Springfield, Mass.

NEW YORK,
11 East 16th St.

PHILADELPHIA,
1333 Arch St.

ATLANTA,
168 Peachtree St.

SAN FRANCISCO,
122 McAllister St.

The Old and New Way



We had heard so much of the **Beethoven Piano** which Mrs. Johnson sent for, that while down her way one day last week we stopped in and looked at it. We were paid for our trouble. It is certainly one of the most magnificent Pianos we have ever seen.

The case is made of that beautiful wood, French Burl Walnut, a marvel of carved and polished work. The interior construction is perfection itself, and the tone! Well, it was just about as sweet as anything we ever heard. Asked to guess the price, we said \$600.00 or \$700.00 and were very much surprised when Mrs. Johnson informed us that it was considerably under \$300.00. When requested for information as to how she ever obtained such a high grade piano at such a figure, Mrs. Johnson replied that she saw the advertisement of the **Beethoven Piano Company, Box No. 1316, Washington, N. J.**, in **REVIEW OF EDUCATION**, and sent for their catalogue, which is free. It was promptly sent and although she had no immediate intention of purchasing, yet the Company made her a special offer which was so good that she placed her order within a day or two.

Mrs. Johnson informs us that she never dealt with more polite and honest people than the above mentioned Company. The **Beethoven Piano Co.** are the pioneers in a new industry, that of manufacturing and selling pianos and organs direct from the factory to the home at a small profit over the cost to manufacture, thus saving their customers all outside profits. We advise all our readers to send and get a **Beethoven** catalogue whether they intend to purchase now or later on.

A SOCIABLE MAN



Will appreciate the advantages of the roomy Club Car on the "Great Western Limited" leaving Chicago every night for St. Paul and Minneapolis,

... Via the ...

CHICAGO GREAT WESTERN RAILWAY

J. P. ELMER, General Passenger Agent,
113 Adams Street, CHICAGO.

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—BIRDS AND NATURE one year and a complete set of these Trees for only \$2.00.

A. W. MUWFORD, Publisher,

203 Michigan Ave., Chicago.

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

..Of..

A B C BOOK OF BIRDS

\$1.00

Mary Catherine Judd has written an A B C book of birds, which contains twenty-six as handsome colored plates of as strikingly plumaged birds as it is possible for the color photographic art to produce. The first illustration is that of a fine specimen of the great bald eagle backed by the American flag. To make the bird fit the first letter of the alphabet it is called, as rightly it should be, the American bald eagle. Among the other birds shown are the gorgeous flamingo, the resplendent cardinal, the ruby-throated hummer, the great diving loon, the familiar meadowlark and the practically extinct wild pigeon. Miss Judd has given a catching little rhyme with each bird, as well as an accurate prose description of the bird and its habits. The color scheme of both covers is beautiful. The bluejay adorns the front of the book, while the cardinal, as natural as life, lends his beauty to the back. No better child's book can be found.

("The A B C Book of Birds," by Mary Catherine Judd. A. W. Mumford, Chicago. Illustrated. \$1.)

—From Chicago Record-Herald.

A. W. MUMFORD

203 Michigan Ave.

Chicago



BEETHOVEN

PIANOS and ORGANS

You can get any high-grade BEETHOVEN

PIANO or ORGAN FREE

of any charge set up in your own home, no matter where you live. Write us to-day for full particulars and we will surprise you with the bargains we have to offer you.

WE DON'T WANT ANY MONEY

in advance. Our new catalogue will show you how to get a high-grade Piano or Organ at the right price and on the right terms.

ONE YEAR'S FREE TRIAL TO ALL

We ask no advance payment and sell on terms to suit any purchaser. **NO AGENTS, NO STORES, NO MIDDLEMEN.** Only one way from our big factory right into your own home at lower than **WHOLESALE PRICES.** Send to-day for our new and magnificent up-to-date **SPECIAL BARGAIN CATALOGUE** just out, of Pianos and Organs (mention which) **ABSOLUTELY FREE.**

BEETHOVEN PIANO and ORGAN CO.,

BOX 1316 WASHINGTON, NEW JERSEY.

No. 11316 After sending for Catalogue cut this advertisement out and keep this number where you can get at it. It may pay you handsomely.



BIRDS OF LAKESIDE AND PRAIRIE, \$1.00—For Bird Lovers

"Birds of Lakeside and Prairie," just off the press of A. W. Mumford, is the work of Edward B. Clark, a Chicago newspaper man, who has made a name for himself as a writer on bird life. The book is splendidly illustrated with sixteen full-page color photographs. These studies of bird life should be of peculiar interest to Chicagoans, for they were made right here in the city parks and in the suburbs. The true home of the bird is the country, but the feathered visitors do not entirely forsake their city friends. Indeed, Mr. Clark has found an astonishing variety of them and is a mighty hunter—with the opera glass. He is alone in his work here in the West and has done for our birds what Bradford Torrey and others have accomplished in the East. The narrative of his hunting trips is interesting and has a distinctive literary charm.

BIRDS OF LAKESIDE AND PRAIRIE, \$1

BIRD LIFE ABOUT CHICAGO.

Edward B. Clark has put in book form the results of his investigations into the bird life of Chicago and its vicinage, giving it the name of "Birds of Lakeside and Prairie." It is illustrated by no less than sixteen admirable bird portraits, in color, taken in every case from birds not easily identified and providing an admirable supplement to the notes made concerning them. The entire volume is compact and handsome, but the absence of lettering on its back deprives it of identity when on the shelf and should be remedied immediately.

Mr. Clark, as his personality is disclosed by his writings, is, first of all, a lover of birds and all nature. He likes to hunt them, but his only weapon is an opera-glass for their better observation, following here the spirit of Emerson's well-known lines. Like other lovers of the physical world about us, he admires all Nature's moods,

and therefore finds himself out of doors at all times of the day and at all seasons of the year, learning at the knees of the great teacher of us all. Much of that lost knowledge which used to be part of our common human inheritance, but has now been exchanged for the tawdry knowledge we call civilization, has been recovered by Mr. Clark with indefatigable painstaking in this way, and his pages read like a treatise on a forgotten art, and appeal equally to old and young.

There are fourteen papers in the book, of which thirteen are made up of matter hitherto unpublished. They cover the territory in Chicago and for many miles about the city, rivers and swamps, forests and plains, with loving kindness and catholic sympathy. No better book for children will be printed this year, and no lad could ask a better education in thoughtfulness for the birds than can here be obtained.

—Chicago Evening Post.

A. W. MUMFORD, Publisher,
203 MICHIGAN AVENUE, - - CHICAGO.



BETWEEN



THROUGH PULLMAN SERVICE
BETWEEN CHICAGO AND



IF YOU ARE CONTEMPLATING A TRIP, ANY PORTION OF WHICH CAN BE MADE OVER THE CHICAGO & ALTON, IT WILL PAY YOU TO WRITE TO THE UNDERSIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

The
Pioneer
Limited.

Famous
Train
of
the
World.

CHICAGO—ST. PAUL—MINNEAPOLIS

VIA

The St. Paul Road.

(Chicago, Milwaukee & St. Paul Ry.)

Equipment and Service
Unequaled.

Time tables, maps and information
furnished on application to

F. A. MILLER, General Passenger Agent,
Chicago, Ill.

BIRDS OF LAKESIDE AND PRAIRIE

By EDWARD B. CLARK.

16 Colored Illustrations

Price \$1.00

In this volume of field sketches the author takes his readers with him to the haunts of the birds in the Middle Western country and together they study the songsters and learn of their ways. Mr. Clark is an authority on birds and is known throughout the entire country for his writings upon the subject of our feathered friends.

Read what the best known Chicago critics say of "Birds of Lakeside and Prairie."

"Mr. Clark has done for the birds of the Middle Western region much the same service as Bradford Torrey has accomplished for the feathered denizens of eastern woods and meadows. Nor need one hesitate to compare the literary charm of the newer writer with that of the other.

Mr. Clark's volume will make a bird lover of almost anybody who reads its sparkling pages and studies its sixteen superbly colored illustrations. It tells of ornithological adventures in the Skokie and in various other haunts of birds in the country surrounding Chicago, besides chronicling the results of more distant excursions, notably one in the region of Lost River in Southern Indiana. The peculiar value of the book lies in the absolute originality of its materials, in the humor and sympathy of its spirit and of the author's power of combining the interesting with the scientifically accurate."—*Extract from Edwin L. Shuman's review in Chicago Record-Herald.*

Wallace Rice, in the Book Number of the Chicago Post, November 30, 1901, says in the course of his review:

"Mr. Clark, as his personality is disclosed by his writings is, first of all, a lover of birds and all nature. He likes to hunt them, but his only weapon is an opera glass for their better observation, following here the spirit of Emerson's well known lines. Like other lovers of the physical world about us, he admires all nature's moods, and therefore finds himself out of doors at all times of the day and at all seasons of the year, learning at the knees of the great teacher of us all. Much of that lost knowledge which used to be part of our common human inheritance, but has now been exchanged for the tawdry knowledge we call civilization, has been recovered by Mr. Clark with indefatigable painstaking in this way, and his pages read like a treatise on a forgotten art, and appeal equally to old and young. There are fourteen chapters in the book, of which thirteen are made up of matter hitherto unpublished. They cover the territory in Chicago, and for many miles about the city, rivers, and swamps, forests and plains with loving kindness and catholic sympathy. The book is illustrated by no less than sixteen admirable bird portraits in color."

In the course of a review of something more than half a column in length, Colonel J. W. Crawford says in the Chicago Evening Journal:

"In 'Birds of Lakeside and Prairie' Mr. Clark has written a charming book. It cannot fail to interest and instruct, not only students of bird nature but the public at large. The subject is one to which little general attention is paid, yet it is one that has peculiar charms. Especially is this true when the text is treated after the manner of the volume in question. Mr. Clark has avoided all technicalities, treating his subject in an easy, delightful running style that takes one immediately into close sympathy with the birds."

John D. Sherman, in the Chicago Inter Ocean, says in part:

"Mr. Clark has found an astonishing variety of birds and is a mighty hunter—with the opera glass. He is alone in his work here in the West and has done for our birds what Bradford Torrey and others have accomplished in the East. The narrative of his hunting trips is interesting and has a distinctive literary charm. The book is splendidly illustrated with sixteen full page color photographs.

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago.

Standard Literature for Schools

A Series of Choice Books for Glass Reading and School Libraries.

AMERICAN HISTORY.

		List Price. Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years.....	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years.....	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse Show Robinson (Kennedy), No. 10	For 6th and 7th Years.....	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years.....	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years.....	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years.....	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years.....	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years.....	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulstun), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years.....	.20	.30
Rob Roy (Scott), No. 28	For 6th and 7th Years.....	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

FRENCH, SPANISH AND ROMAN HISTORY.

Alhambra (Irving), No. 33	For 6th and 7th Years.....	.12½	.20
Last Days of Pompeii (Bulstun), No. 38	For 7th Year	.20	.30
Ninety-Three (Hugo), No. 38	For 7th Year	.20	.30
Peasant and Prince (Martineau), No. 41	For 6th and 7th Years.....	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (For Second School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (De Foe), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Robinson (Wyss), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne) (4 stories), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

Black Beauty (Sewall), No. 31	For 5th and 6th Years.....	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years.....	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years.....	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years.....	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years.....	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years.....	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text	.12½	.20
Evangeline (Longfellow), No. 21	Full Text	.12½	.20
Five Great Authors No. 42	Each Selection Complete..	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems.	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11	Complete	.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete..	.20	.30
Silas Marner (Eliot), No. 43	Complete	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete	.20	.30

University Publishing Co., 43-47 E. 10th St., New York City.

THE REVIEW
OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. NO. 6.
WHOLE NUMBER 68.

CHICAGO, JANUARY, 1902.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment	201
The Place of Geography in the Elementary Schools, Dr. W. T. Harris	206
Individual Instruction in the Public Schools, John Kennedy	212
The Rights of Donors, Alton B. Parker	216
The Education of the Young American Farmer, President W. M. Beardshear	220
Commercial Education	221
Plants and their Environment, Professor N. M. Fennerman	223
The Red-Headed Woodpecker	224
The Blue-Mountain Lory	225
The Educational Value of Play, Dr. John E. Bradley	226
The Sleep of Children	231
The Personality of the Teacher	232
The Moral Element	233
The Education that Counts	234
Arithmetic, Robert J. Aley	235
Some Texts from Hinsdale's Art Study, C. W. Mickens	236
Book Reviews	238
Educational Articles in the January Magazines	240

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

Entered at Chicago Post Office as Second Class Matter.

Colored Supplement, Red-Headed Woodpecker and Blue-Mountain Lory,
with this number.

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$2.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

Permit me to commend especially the REVIEW OF EDUCATION page containing titles bearing on educational topics selected from magazines of the current month.

DAVID R. MAJOR.

Ohio State University.

Columbus, O., Dec. 18, 1901.

Industrial Pictures.

Size 6 x 9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,

203 Michigan Ave.

Chicago, Ill.

A-B-C BOOK OF BIRDS

— BY —

MARY CATHERINE JUDD.

With Nonsense Rhymes for the Little Ones
and Prosy Sense for Older Ones. \$1.

"Resplendent in bright red binding, and with two beautifully executed bird portraits in natural colors on the outside covers, this bird book is of exceptional attractiveness and worth. The pages measure almost eight by eleven inches. Twenty-six superbly printed color half-tones of bird life are accompanied each by two pages of reading matter—one a very clever jingle, the other a compact prose statement of interesting and instructive information about the bird, his habit, and his haunts. Mothers, teachers and young folks will all find choice material here."—*Sunday-School Times*.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

CHICAGO.

The Psychology of Childhood

By **FREDERICK TRACY,**

Lecturer in Philosophy in the University of
Toronto.

With Introduction by **PRESIDENT G. STAN-
LEY HALL,** of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

—
This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

—
*Send for complete descriptive list of
Heath's Pedagogical Library, 37 volumes.*

D. C. HEATH & CO., Publishers

Boston

New York

Chicago

FOR 75 CENTS

We will send the following three games to one address, prepaid. Or any one game sent upon receipt of price.

LITERATURE GAME, by A. W. Mumford. 500 questions and answers on English and American Literature. 100 cards, 2¼ x 3 inches. Price, 25 cents.

GAME OF INDUSTRIES. 400 questions and answers on the great industries of our country. 100 cards, 2¼ x 3 inches. Price, 25 cents.

GAME OF BIRDS. Illustrations of popular birds in colors, true to nature, on 52 finely enameled cards, 2½ x 3½ inches. Makes the identification of our birds simple and positive. Price, 35 cents.

These games are so interesting and instructive you'll certainly enjoy them. Just what you have been wanting for the school and home. Each game enclosed in case, with full directions for playing. Address

A. W. MUMFORD, PUBLISHER.

203 Michigan Ave., Chicago.

A Few "Ifs" for Teachers...

IF you have to teach **MUSIC** in your grade,
IF you have to teach **DRAWING** in your grade,
IF you would like a set of model lessons in

**READING,
ARITHMETIC,
GEOGRAPHY, ETC.**

get **American Education**, in the current numbers of which is an excellent and practical series of lessons on these subjects.

A SAMPLE COPY FREE.

NEW YORK EDUCATION COMPANY,

81 CHAPEL ST., ALBANY, N. Y.

Birds of Song and Story

By ELIZABETH AND JOSEPH GRINNELL.

16 COLORED PICTURES.

PRICE, ONE DOLLAR.

There is a charm about the writings of both of these authors that will appeal strongly to all lovers of good literature, and especially so to all who love at once to read the printed page and the book of nature.

"Birds of Song and Story," by Elizabeth and Joseph Grinnell, contains a series of interesting sketches of the habits and peculiarities of birds. Appropriate poetical quotations relating to different songsters, written by well-known poets, are scattered through the volume. Many anecdotes, personal observations and historical references enrich the sketches. The work is especially written for children, using simple language and a pleasing style of diction likely to hold the attention of the reading boy or girl. The illustrations are excellent, being colored photographs of birds in natural surroundings in the grass, trees or beside the nest. The coloring is true to nature and an acquaintance with the pictures will aid the child in identifying the birds in the trees.

Please send me 5 copies of Birds of Song and Story, Grinnell, by express; 45 copies fast freight.

J. S. GLASSCOCK.

Pasadena, Cal., Nov. 29, 1901.

A. W. MUMFORD, Publisher,

203 Michigan Avenue, Chicago, Ill.

- - The Children's Hour - -

A Song Book for the School and Home, by Frank L. Sealy, Conductor of the Newark Madrigal Club, Accompanist for Walter Damrosch in the New York Oratorio Society, etc.

A NEW SONG BOOK

With arrangements from Abt, Schumann, Reinecke, Mendelssohn, Fesca, Peel, Gade, Gluck and others; melodious songs of pronounced carrying, wearing and singing qualities, quickly learned, and easily within range of children's voices. Over 5,000 used in the Newark Public Schools.

Cloth. 175 pp. Price, 50 cents.

MORE PICTURES IN NATURAL COLORS.

In addition to the 472 beautiful plates in colors true to nature which have appeared in Birds and Nature, we have printed the following, size 7x10, suitable for framing.

Two cents each; the twelve for 20 cents.

- | | |
|---------------------------------------|---------------------------|
| 1001 Gold-finch Tanager, Indigo Bird. | 1007 Red Fox. |
| 1002 Ruffed Grouse. | 1008 Lioness and Cubs. |
| 1003 Wood Duck. | 1009 Holland Water Scene. |
| 1004 Gray Squirrel. | 1010 Lake Steamer. |
| 1005 Geyser—Old Faithful. | 1011 Skating Scene. |
| 1006 Golden-eyed Ducks. | 1012 Mammoth Cave. |

Large pictures in the colors of nature. Price, 25 cents each or the 3 for 50 cents, postpaid. All suitable for framing.

1201 Golden Pheasant, life size 18x24 inches.

1202 Song of the Lark (Breton) 18x21 inches.

1203 Gladstone, the Grand Old Man, 18x24 inches.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

The Song Budget Music Series.

\$1.50 PER DOZ., \$10 PER HUNDRED.

1. **The Song Budget.** Paper, small 4to, pp. 76, 15 cts. Leatherette, 25 cts.
2. **The Song Century.** Paper, small 4to, pp. 87, 15 cts. Leatherette, 25 cts.
3. **The Song Patriot.** Paper, small 4to, pp. 80, 15 cts. Leatherette, 25 cts.
4. **The Song Budget Music Series Combined,** containing all three of the above in one volume, with opening exercises for schools added. Cloth, small 4to, pp. 260. 50 cts.

The distinguishing features of the Song Budget Music Series, of which nearly half a million copies have been sold, are these:

- 1st. To give a good deal for the money.
- 2d. To give only the best music.
- 3d. To give music just as it was written.
- 4th. To give only songs that are strong.

The Sentence Method of Teaching Reading. By GEORGE L. FARNHAM. Cloth, 50 cts.

As the word method was a step above the alphabet method, so the sentence method is a step beyond the word method. "The unit of thought is the sentence," and if the child considers the words as units in learning to read, he must unlearn his habits of reading in order to read naturally. Mr. Farnham shows how much more easily children will learn to read, and how much better they will read, where this method is employed. The book is in general use all over the country; extensively used in Chicago the past year.

OLD STORIES RETOLD

With 59 Original Illustrations. By PAUL BINNER. Boards, 16mo, pp. 64. 25 cts.

It is no longer a question whether children shall read fairy tales. The Gradgrinds have been silenced, and it is admitted that something else besides "facts" shall enter into the education of children. So the question is now how these fairy tales may be most attractively presented to the child, and surely never before have they appeared in more enticing dress.

EDUCATIONAL GAMES

Historical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards, 2¼x3¾ inches. 50 cts.

The cards contain 500 questions and answers, and afford a most interesting as well as profitable game for home and school.

Geographical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards 2¼x3¾ inches, 50 cents. Similar to Historical Game.

THE GAME OF INDUSTRIES

Is an educational game consisting of 100 cards and 400 questions and answers on the great industries of our country. 2¼x3 inches, 25 cts.

LITERATURE GAME

By A. W. MUMFORD. 500 questions and answers on English and American Literature. 100 cards, 2¼x3 inches, 25 cts.

SPECIAL OFFER.

The Four Games to One Address Prepaid for \$1.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

Chicago.

—THE—
CHICAGO TEACHERS' FEDERATION
...BULLETIN...

A Weekly Paper Published by the Chicago Teachers' Federation.

The Federation is an organization of class-room teachers and includes more than three-fifths of the entire teaching force, from the kindergarten to the high school departments. It exists for the advancement and protection of the best interests of the schools, teachers and pupils. It was organized in the spring of 1897, and in 1898 secured the adoption by the Board of Education of a new salary schedule which provided for a substantial increase of salary. Owing to lack of revenue this schedule was made only partially effective in 1898, 1899 and 1901. In 1900 the Federation decided to investigate the cause of the great lack of revenue in Chicago, and for that purpose employed two of its members, who should devote their entire time to the work. This investigation led to the discovery of an enormous amount of property which had escaped taxation, thus decreasing revenue and increasing the burden of the ordinary taxpayer. The matter became eventually the subject of court proceedings and went to the Supreme Court of the state, which on Oct. 24, 1901, upheld every contention of the Federation and ordered the assessment of the property in question.

The Federation reaches 5,000 subscribers and its outside as well as local list is increasing daily. Subscription price is nominal, being only 50 cents per year. Advertising rates furnished on application to advertising manager at

OFFICE OF BULLETIN,
437 Unity Building, Chicago.

Beautiful Bird Calendar

→ FOR 1902 ←

This is the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

This is an exquisite bit of color work. Each of the six pages of the calendar (9½x12½) has upon one side a beautiful picture of some bird—the owl, bluebird, warbler, red-headed woodpecker, passenger pigeon and blue jay—while on the reverse side is a full, authentic, interesting description of the bird. Each bird is not only colored to life, but the pose and surroundings are equally true to life.—*Journal of Education*.

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

6

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming, twelve hundred, begin April first? Telegraph.—To *Principal W. B. Carhart*, Coeymans, N. Y., March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart*, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To *President Smiley*, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley*, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To *Mr. Carhart*.

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart*, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To *Mr. Carhart*, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart*, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To *President Smiley*, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart*, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To *Mr. Carhart*, March 27.

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

Birds of Song and Story

By ELIZABETH and JOSEPH GRINNELL

16 Colored Plates. Price \$1.00.

These authors are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of outdoor study for many years but they have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends. The habits of every feathered friend of the dooryard and of the deep woods are known to Mr. and Mrs. Grinnell just as intimately as are the legends and the folklore of other ages touching the same bird. The title "Birds of Song and Story," is an eminently fitting one for the book, for in a few words it describes thoroughly its scope. There is a charm about the writings of both these authors that will appeal strongly to all lovers of good literature and especially strongly to all who love at once to read the printed page and the book of nature. Artistically, "Birds of Song and Story" will be made as nearly perfect as it is possible that any book may be.

A. W. MUMFORD, Publisher

203 Michigan Ave. - - Chicago

Birds of Song and Story

\$1.00.

FOR NATURE STUDENTS.

Some of the Most Familiar of American Birds.

"'Birds of Song and Story' by Elizabeth and Joseph Grinnell (A. W. Mumford, Chicago), gives to the young lover of nature an introduction to the haunts, habits, notes and color of the common songsters. It gives also traditional stories connected with them, together with bits of sentiment and poetry relating to them. It is written in familiar conversational style, and is scientific without being weighted with heavy technical terms. It has many illustrations and the coloring is remarkably true to nature."—*Chicago Chronicle*.

A. W. MUMFORD, Publisher,

203 Michigan Avenue, CHICAGO.

Greatest of all Tonics
Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
 and loss of Nerve Power—
 Invigorates the Entire System.

100 Beautiful Seashells, 30c; 5 Rare Indian Relics,
 30c; 5 Rare Minerals, 25c; 15 Curiosities, 27c;
 5 Choice Old Coins, 16c; Indian Tomahawk, 35c; our
 catalogue and a Rare Indian Relic for 10c.
 E. Stamp Coin & Curio Co., Box 162, Wakefield, R. I.

Please send 5 double theme
 volumes, half morocco, of your
 excellent magazine, "Birds and
 Nature." Rev. Jas. Veale.
 Jacksonville, Fla., Dec. 12, 1901.

Review of Education One Year
 —AND—
 50 Colored Plates of Birds, Animals, Plants, Etc.
 ...\$1.50...

BIRDS OF LAKESIDE AND PRAIRIE
 ===== \$1.00. =====

"Edward B. Clark of Chicago has made some exceedingly critical observations on 'Birds of Lakeside and Prairie,' and the same have been embodied in a book published by A. W. Mumford (Chicago-New York) sixteen handsome illustrations in color accompanying the text. Mr. Clark presents the bird life of the lakesides and prairies of the Middle West in a charming way, and invests them with an individuality as a strongly marked as Thompson-Seton gives to his wild animals."—*New York World*, Dec. 21, 1901.

It has been a matter of wonder to many why some bird lover did not do for the Middle West what Burroughs and Torrey have done for New England and the eastern seaboard. A modest beginning has been made in this direction by a little book, 'Birds of Lakeside and Prairie,' written by Edward B. Clark, a local writer. Mr. Clark knows birds and loves them, and it is to be hoped that his little book will meet with such success as will justify him in putting out a more ambitious book in the future. The chapter titles of the book, attractive as they are, do not hold out false hope, and he who reads 'Birds of a Smoky City,' 'In Southern Hoosier Hills,' 'Spring on the Kankakee,' 'On the Trail of Pokagon,' will wish to know more of one who can write so charmingly of our feathered friends. There are a large number of fine colored pictures of birds."

A. W. MUMFORD, Publisher,
 203 Michigan Avenue, - - - - - CHICAGO, ILL.

The Review of Education.

VOL. VII.

CHICAGO, JANUARY, 1902.

No. 6.

EDITORIAL COMMENT.

Judge Richard S. Tuthill, of Chicago, recently addressed the Woman's Club of River Forest, Ill., on "The duty of the state with respect to neglected and delinquent children." He said, in part:

"In our criminal courts to-day over one-half the prisoners are below the age of twenty years, and this is merely because our Christian community does not take care of our delinquent children, but allows them to grow up amid surroundings which of necessity make criminals of them. I may say broadly that God made only one kind of boy. We have built many homes and schools and asylums, for the blind and the deaf, the orphan and the decrepit poor, the insane and the feeble-minded, and I would not have one cent of these great appropriations diverted from its original purpose, but there is one incapable human being who has been neglected heretofore, and that is the delinquent child. Many people say of him that he is a degenerate, that he cannot be reformed, because they have taken him to Sunday-school a few times and he has remained as bad as ever, but to them I say that, under the same conditions, their own children would be no better, and that when we provide for these children of the streets a home where they can receive the same training that our own children receive, they will grow up to be, many of them, among our most eminent citizens, for they will have the spur of necessity to urge them on."

Judge Tuthill believes, with all people who are acquainted with the nature of a child, that no school which is in any sense a penal institution is a fit place to confine a young boy, for when he "comes out he bears the prison taint that is so hard to eradicate." In regard to a better means of changing the character of the delinquent child he said:

"I hope for, and I am working for, a country home for these children, a place where they can be in the open air and learn the work of the farm. For this a large tract of land will be needed, a whole section if we can get it; certainly not less than 320 acres. The state of Illinois has appropriated for this purpose \$35,000, and I have a list of private subscriptions amounting to \$100,000. In all \$250,000 will be needed, and undoubtedly the rest can be raised in a very short time. The institution must of course be under state supervision, though I would like to see it a gift to the state from the people. The expense of maintaining it would no doubt be cheerfully assumed by the state. In a short time I hope to see all these plans consummated."

The meetings of the National Educational Association have proved of incalculable value to the educational interests of our country. This is an appropriate time to bring to the attention of our readers the annual meeting of the association for the year 1902. As stated in a circular letter issued by the secretary, Mr. Irwin Shepard, this gathering will be held at Minneapolis, Minn., July 7-11. Even at this early date the citizens of Minneapolis have formed extensive plans for the entertainment of the members and others who may visit their city during that time. "The railroads of the Western Passenger Association have united in granting the usual rate of one fare for the round trip, plus the two dollars membership fee, with provisions for the extension of tickets for return to September 1, on the deposit plan." It is expected that the same ac-

tion will be taken by other railway associations at an early date. The railway lines radiating from Minneapolis will also offer, at the close of the convention, special excursion rates to all western and northwestern points. These rates will probably include trips to the Rocky Mountains, the Yellowstone National Park and to the North Pacific Coast. This opportunity should not be lost by teachers, especially by those whose special field is geography or in the realm of the natural sciences. By beginning thus early to plan many will be enabled to take advantage of this unequaled opportunity to enrich their store of facts, which may be gleaned from the experiences of others and from a direct contact with nature.

It has become a "fad" to discuss "fads" and "faddists." The subject is extensively considered in our newspaper literature. Many innovations are justly termed "fads." Yet it is unreasonable to place in this category every new study that is introduced into the curriculum of our schools by thinking and experienced teachers. All innovations must pass through an experimental stage which will prove them either of value or that they are worthless. The new ideas advanced by the enthusiast must be developed and frequently recast by the calm reflection of an unprejudiced mind before they become of great value. In a recent "lay editorial" in the *Chicago Tribune* Professor William K. Fowler, State Superintendent of Nebraska, says:

"A school fad is a part or a line of school work with which one is not in full accord or sympathy, through ignorance of its purport or on account of an honest difference of opinion. It is a schoolroom innovation in the experimental stage. Time alone proves their value or their worthlessness, and that which is righteously dubbed a fad will fade as a fashion of the hour. A fad's advocate is called a faddist. Faddists are of two kinds—zealots and advertisers. The former require protection, caution, sound counsel. The latter require exposure—long time! Fads are of two kinds—ephemeral and eternal—and mortal man, be he editor or educator, cannot always classify. A fancy today may be a fad to-morrow, a foible the next day, and, in the hands of some unbalanced enthusiast, a fool thing thereafter. We do not now consider geography a fad, but the courtiers of Isabella of Spain said that subject was

a fad with one Christopher Columbus. * * * Whatever tends to improve the rural schools and to keep the boys on the farm should receive universal approbation, be it fad, fact or fancy. In Nebraska at present the elements of agriculture, including a fair knowledge of the habits and structure of the common plants, birds, insects and quadrupeds, is a fad, perhaps, but that great agricultural state will instruct its youth thoroughly in the causes and dependencies of its commonwealth."

The year which closed with the 31st day of December, 1901, will be remembered for many decades by those interested in educational matters. It was a year in which the "fad" of giving to educational institutions was more marked than ever before in the history of this country. Gifts ranging from \$5,000 to several millions of dollars have been given to nearly one hundred and fifty institutions of learning, not including those given for the founding of public libraries. Most prominent among these gifts is that of Mrs. Jane L. Stanford, who recently enriched Leland Stanford University to the extent of \$30,000,000. This is not a bequest, but a gift executed by due process of law, that permits of no future contests by her heirs.

"A part of this donation, the \$12,000,000 of real estate, was deeded to the university some time ago, but it has derived no benefit from it for the reason that the validity of the deeds was called in question and pronounced against finally by the Supreme Court of the State. The property, however, has now been redeeded in such form that the title is perfect. In addition to this, Mrs. Stanford gives outright to the university \$18,000,000 in bonds and stocks which Mr. Stanford had set apart for the same purpose, but which had not been transferred. The delay has worked no loss to the university. On the other hand, it has gained by it, as many of the securities have largely increased in value. Mrs. Stanford's gift perfects the largest endowment an American university has ever received."

Another notable gift, and one that has never been equaled in the history of any country, is the offer of Mr. Andrew Carnegie to our national government to endow an institution, "The University of the United States," under whose direction post-graduate investigations and spe-

cial instruction may be conducted. The idea is that of a vast university extension organization, possibly without central buildings, but giving to the students of all universities and colleges unequaled facilities for research work. Not only would this be accomplished at the home institution, but also in that extensive storehouse of materials to be found in Washington, where they have been gathered from all parts of the world and arranged by the government experts. Few realize how vast and how valuable this collection of crude and prepared products has become. There one may trace the development of practically all industries. There also may be studied the development of both plant and animal life and its relation to the economy of man.

The offer made by Mr. Carnegie is a noble one and should be accepted in the spirit in which it is made. It embodies and puts in practical shape an idea as old as Washington's time. It requires no appropriation of the public funds. The government is only asked to give a suitable site for it, which it can do easily, and thereafter the government would act only as a trustee, as it does for the Smithsonian Institution. It is also a practical solution in the simplest manner of the project for a national university which has occupied public attention so long and made no progress because of conflicting views and determined hostility in some quarters.

By articles of incorporation filed at Washington January 4, 1902, the national university to be founded by Andrew Carnegie was named "The Carnegie Institution." The following aims of the new institution are named:

"To acquire, hold and convey real estate and other property necessary for the purposes of the institution and to establish general and specific funds.

"To conduct, endow and assist investigation in any department of scientific literature or art, and to this end to co-operate with governments, universities, colleges, technical schools, learned societies, and individuals.

"To appoint committees of experts to direct special lines of research.

"To publish and distribute documents.

"To conduct lectures.

"To hold meetings.

"To acquire and maintain a library, and in general to do and perform all things necessary to promote the objects of the institution."

The incorporators are John Hay, Secretary of State; Edward D. White, Associate Jus-

tice of the Supreme Court of the United States; Charles D. Walcott, Superintendent of the United States Geological Survey; John S. Billings, formerly Surgeon General of the United States Army, and now librarian of the Astor Library in New York; D. C. Gilman, until recently President of the Johns Hopkins University of Baltimore, who is regarded as Mr. Carnegie's personal representative; and Carroll D. Wright, United States Commissioner of Labor.

The following is a summary of the donations during 1901 to the principal educational institutions of the United States:

Amherst College	\$ 242,400
Armour Institute	1,250,000
Bowdoin College	25,000
Brown University	900,000
Bryn Mawr College.....	250,000
Carnegie Institute	1,000,000
Columbia College	421,246
Cornell College	340,500
Dartmouth College	612,500
Hampton Institute	69,000
Harvard College	2,577,675
Johns Hopkins University	1,350,000
Leland Stanford University.....	30,000,000
Massachusetts Inst. of Technology.	170,000
Northwestern University	90,000
Oberlin College	718,634
Princeton College	375,000
Pittsburg Polytechnic Institute....	1,000,000
Radcliffe College	207,000
Smith College	207,000
Tuskegee Institute	766,000
Tufts College	54,000
University of Chicago	3,245,437
University of Michigan	25,000
University of Minnesota.....	50,000
University of Pennsylvania.....	169,000
Vassar College	143,000
Wellesley College	308,749
Williams College	5,000
Yale College	1,699,370

The people of the United States do not claim that their educational methods are perfect, but they do believe that they are steadily improving them and that they attain toward perfection. The fame of the good results obtained in our schools, both secondary and higher, is gradually reaching all civilized nations. At a meeting of the educational authorities of London, Eng., held Dec. 16, 1901, it was decided to send a commission during the present year to the United States to study its educational methods, especially in regard to their bearing on commerce and indus-

try. The importance of this movement was so thoroughly appreciated that Mr. Alfred Mosely, one of the authorities, offered to defray all the expenses.

At the beginning of this new year France has gone a step in advance of the other nations of Europe who, with her, have been closely watching the advance of the commercial and educational interests of the United States. In order that the youth of France may have the benefit of the energy and progressive spirit that pervades all our methods one of her wealthy citizens has provided the means for the establishment of a school in Chicago, affiliated with her great university. The *Chicago Daily News* says of this project:

"The announcement that a French millionaire, Robert Lebaudy, has placed the sum of \$1,000,000 in the hands of his agents to be used in founding a French industrial college in this city offers a striking practical confirmation of the European appreciation of American methods. The incident is probably unique in the history of nations. M. Lebaudy, presumably, is actuated solely by patriotic motives. He finds, however, that he can best serve his country and his countrymen by endowing an institution to be maintained in the United States and in connection with an American university. He also decided that the young Frenchmen that are to attend the college will have the best opportunities for studying American industrial and commercial methods in Chicago. Accordingly he has arranged that each year 200 graduates of French colleges shall come to America and take up their studies in this city. That Europe has been studying American business methods closely, with a view to patterning after them, has been known for some time, but the action taken by the French millionaire testifies to the sincerity of European sentiment on the subject more eloquently than could any amount of verbal comment or criticism."

It is an easy thing to fill out a report card for the perusal of a child's parents, but a more difficult task to make out the loss and gain account which is written only on the heart of the teacher. Figures cannot measure the growth of that mysterious, inscrutable thing—the hu-

man soul. Happy the teacher who, in looking back over the past month, can see not only a gain which can be recorded on a report card, but, looking into the rows of school-room faces and recalling her striving with each child soul, can dare to believe that, through this striving, some evil habit has been corrected, some unfortunate tendency thwarted, some eye opened to beauty, some timid, sensitive little soul made more confident. And twice happy should be the teacher who, in searching and trying her *own* heart, can answer satisfactorily such questions as these: Have I prepared my work each day as I should? Have I, while expecting my pupils to be self-controlling, been able at all times to control myself? Have I, in my work, displayed even a little of that sweetness and gentleness of disposition which characterized the Greatest of Teachers? Have I been the woman and the teacher, or the teacher alone? Etc. As for myself, I have to confess—but no, I won't. —A. S. G. in the *Educational Journal of Western Canada*.

Bishop Spalding says, "Life is the unfolding of a mysterious power, which in man rises to self-consciousness, and through self-consciousness to the knowledge of a world of truth and order and love, where action may no longer be left wholly to the sway of matter or to the impulse of instinct, but may and should be controlled by reason and conscience. To further this process by deliberate and intelligent effort is to educate."

This month the two journals which are devoted to the advancement of geographical education in America will be united and issued under a new name. These journals are *The Bulletin of the American Bureau of Geography*, edited by Professor Edward M. Lehnerts, and *The Journal of School Geography*, edited by Professor Richard E. Dodge. The new journal will be conducted under the joint

editorship of Professor Lehnerts, Professor Dodge and Dr. J. Paul Goode, of the University of Pennsylvania.

A remarkable and unselfish spirit has been shown by the citizens of Quincy, Ill., in their anxiety to better their school system. They sent all the teachers of the Madison school to the last summer's session of Colonel Parker's school, the School of Education of the University of Chicago. They have also furnished the Madison school library with pedagogical literature of all kinds as well as the more valuable supplementary readers. Manual training is also an important factor in the Quincy school curriculum.

No more important building could be erected by the directors of the St. Louis World's Fair than a handsome special structure to be devoted exclusively to the cause of education. We believe that we are voicing the earnest wish of all educators in requesting the authorities of the Exposition to favorably consider this suggestion.

Professor Alfred Bayliss in his annual report for the last fiscal year gives the following statistics:

"Number of pupils enrolled in the public schools, 485,350 males and 427,284 females. The average attendance was 756,558. There were 176 buildings used for school purposes, the estimated value of the properties, including libraries and apparatus, being \$50,839,941. The average salaries of teachers, \$55.22.

The ninth meeting of the International Kindergarten Union will be held in Boston during the first week of next April. An interesting program of addresses and discussions has been arranged. Mrs. Alice H. Putnam, of Chicago, is the president of the organization.

Meetings of the Department of Superintendents of the National Educational Association, of the Association of American Universities and of the Society for the Scientific Study of Education will be held in Chicago during the last week of February.

"Light two candles with one match" was the prompt answer when a kindergarten was asked if she could suggest a non-murderous substitute for the old proverb, "Kill two birds with one stone." Is not this good enough for general adoption?—*Kindergarten Review*.

THE PLACE OF GEOGRAPHY IN THE ELEMENTARY SCHOOLS.*

DR. W. T. HARRIS,

United States Commissioner of Education.

The branches of study pursued in the elementary schools are chosen for the purpose of securing two useful and reasonable ends. In the first place, they are chosen to give the child an ability to understand his environment, and to come into a mastery of it so that he can make it useful to himself. He is taught arithmetic in order that he may divide and conquer; in order that he may measure the things and forces of his environment, and learn how to adapt one set of them to control and utilize another. He is taught geography in order that he may understand the causal relations existing between his habitat, or the place in which he lives, and other places as well as other systems of things and events on the earth.

On the other hand, a second reason for adopting a branch in the course of study is that it develops some faculty or power in the child, and gives him possession of himself in that respect; for one of the primary objects is to develop the intellect, the memory, the judgment, or the heart. By the expression of heart I mean the aggregate of affections and inclinations of the soul. Some discipline in school, like writing, drawing, calisthenics, or manual training, finds its place in the curriculum because of its power to develop the will, the tenacity of purpose, the ability to pay long and continuous attention to one thing, and to form habits of industry, cleanliness, regularity and punctuality, and thus acquire those virtues which make a man a better citizen than he could possibly be without them—which make his service of more value to his fellow-men and give him the ability to get a larger share of service from them than he otherwise could.

Let any one take up the branches of the common school in the light of these purposes, and he will find that those branches, as they are in the schools, are all needed, and that it would not be possible to make any one of them a substi-

tute for any other. But I wish to call attention to the fact that the two principles or purposes which I have named as the reasons which have determined the adoption of branches of study in the schools not only are not antagonistic, but in many particulars agree absolutely. The cultivation of the intellect, for instance, by such studies as arithmetic, grammar, and literature, has for its result not only the unfolding of the powers of the individual within himself, but the enlargement of the individual's sphere of influence among his fellowmen, making him useful to them and making them useful to him.

The literature of the English language or of any other reveals human nature in one or more of its national manifestations. Indeed, each literary work portrays some trait, or, perhaps, several traits or phases, of human nature. The student of literature comes to know the secrets of the human heart. He comes to know how feelings and emotions may become clear ideas and convictions of the intellect, and then how they become translated into deeds, habits, and established forms of living such as appear in the network of manners and customs which forms the substance of the daily life of each man, woman, and child. Literature and mathematics—literature the first and mathematics the second—form important branches of all school education. Literature is the first and most important, because, in order to adjust himself to society, one must understand the motives, desires, and views of the world which his fellow-men entertain. It is impossible for a man to live in a community where he has no insight into or knowledge of the world-view of his fellow-men, and does not know the things that make up their daily consciousness.

This is the ground on which I pronounce literature the most important of all branches of school education, whether it be in China where Confucius

*Abstract of a paper published by *The Forum*.

and Mencius form the matter of school education, or East India where the Vedas and the great heroic poems form the staple of the course of study, or among Mohammedan nations where the Koran is learned, or in Greece where Homer's Iliad and Odyssey were the school books, or in the schools of Boston, New York, St. Louis, and San Francisco, where English literature in the school reading-books does its work in enlightening the pupil as to the modes of thinking and the motives of his fellow-men.

After literature comes geography, meaning by the term what is usually understood by it in the elementary school. After geography comes history, first, that of one's native country, secondly, that of the civilization of the world; after history, grammar, as a special study of the forms of language. In the grammatical forms are revealed the methods of the action of the intellect; for grammar is a sort of concrete logic, revealing not only the methods of thinking, but also the methods of perception and the methods of recollection, which form the laws of memory.

These branches, which throw so much light upon the individuality of the pupil—upon his own nature and upon the nature of the institutions as well as upon the structure of the world in which he lives—form the tools of thought and action; they are the machines, the instruments, by which he supplements his body; they are the organs by which he energizes upon the world outside of him and by which he makes with his fellows combinations useful to them and doubly useful to himself.

Let us for the moment make a list of the important items which the child will get from a superficial study of geography in the elementary schools under what would be admitted to be a poor quality of instruction, namely the unaided study of the text-book, the text-book being of an inadequate pattern, and the so-called teaching being confined chiefly to hearing the words of the book repeated. The pupils of average intellect will acquire some understanding of the main topics touched upon; and they will have in memory, in a more or less digested form, some facts connected with them which

will be retained throughout their lives. The constant use of certain typical facts, familiarity with which is demanded by the newspaper and magazine literature of the day, and which is more or less required by the daily gossip over national and international affairs, keeps the memory fresh in these matters. The average child will carry off with him a pretty vivid idea that the shape of the earth is round "like a ball or orange," or like the moon and the sun which he sees every day. He will also acquire the very important idea that the earth is one of the bodies which move around the sun, although he may not learn the technical term "planet." These simple ideas carry with them a correction of mere sensuous observation by an abstract and deeply scientific train of thought. One's sense-perception does not avail to convince him that the earth is round. This can be reached only by reasoning on the logical presuppositions which are implied to make the fact before him possible.

In the next place, there will be acquired the idea of latitude and longitude, which determine with mathematical exactness the location of any place with reference to base lines, like the equator or the first meridian. The pupil will certainly learn something regarding latitude and longitude, and he will learn a method, the only method by which geographical descriptions may be made accurate. No matter how superficial his study of geography may be, he will also form some approximate ideas of the latitude and longitude of many given places.

We must remember that these general superficial notions are more important than any more specific notions which follow later. It is of more importance to the individual to know that Brazil is in South latitude while we are in North latitude, than to know that the mouth of the Amazon is on the equator, and that the capital of Brazil is about twenty-three degrees South. For ordinary practical thinking the generalities of geography are exceedingly important.

Next the pupil will come to form mental images of the territories that are occupied by states and nations. First, however, he will form an idea of the contours of the several continents and of the great

oceans which separate those continents. Then he will seek to learn the location on those continents of each of its several states and nations. He cannot help acquiring at the same time some historic adjuncts to his geographical knowledge. It will be of value to him every day of his life to have some notions of the shapes, boundaries, and general positions of the States of his own country.

Besides these there is another class of geographical categories which relates to the formation and modification of the features of land and water. Even the poorest geography yet made deals with rivers, and gives information regarding their sources and their outlets, as well as their navigability and their usefulness in furnishing motive power for manufactures. It gives information regarding lakes, highlands, lowlands, and the trend of mountain chains.

Two objects on the earth especially arouse man's wonder and excite him to reflection, namely, the monster elevations of the surface of the land, which we call mountains, and the vast, seemingly unlimited, extension of the surface of the ocean. It has been the habit of geographies for two or three generations to explain the elevation of mountain chains by the molten condition of the elements in the interior of the earth. Once the elevations were supposed to be caused by volcanic agencies; but now, perhaps, the general opinion is that the gradual cooling with the consequent contraction of the earth's crust produces wrinkles on a large scale, wrinkles large enough to form the mountain systems of the Alps or of the Himalayas. No pupil of average intelligence who has studied geography in school at any time during the last sixty or seventy years has escaped forming some idea regarding the prodigious forces of nature which lift up the mountains. Nor has any one within the last fifty years or more escaped the important geological idea of the wearing down of the mountains and hills by the constant effect of rain and the escape of water carrying a load of solid matter to the sea by brooks and rivers.

Climate and the dependence upon it of the fertility of the soil cannot escape the attention of the superficial student of ge-

ography. He gets typical facts, also, in regard to heat and cold. He comes to understand the reason for the distribution of heat as found in the continually varying inclination of the surface of the earth toward the sun at different times of the year and at different latitudes. He understands also how altitude above sea-level affects the temperature. Let an explanation be given in any particular case and it is in the nature of the human mind to generalize it, if occasion offers. Occasion is constantly offering in a country where the people as a people are eye-minded and read the daily newspapers, as well as ear-minded and listen to the gossip of their fellows.

A more important series of observations is initiated by the superficial study of geography of which we are speaking. For the average pupil notes with interest the fact that there is diversity of labor over the surface of the earth; that the people of one section produce one series of agricultural or mineral products, and those of another a different series. He learns, too, that commerce can equalize these productions, taking the surplus of production from one place to the other place that needs it. He learns that the division of labor, therefore, assisted by commerce, enables each person to enjoy the productions of all his fellow-men. He learns how the raw materials produced by agriculture and mining are changed by manufactures into goods which are of far more value than the raw materials. He notes with some wonder and perhaps some incredulity the fact that commerce creates values by converting natural productions which were of no use or value where they were, into articles of very great use and value to the people of another country. The surplus vegetable productions of most of the tropical regions are of no use or value where they are. Commerce, therefore, performs a miracle by turning things into property, carrying them from where they are worthless to where they are valuable.

Geography is not only a science of the formation and modification of different forms or features of land and water, but it is more especially an introduction to the elements of sociology. All the text-

books of geography speak about the occupations of man, and they show more or less clearly the reasons for the diversity of human industry. Moreover, all geographies treat of certain elementary ideas of anthropology. They treat of the different races of men and of their physical and mental characteristics. It is of still greater interest that the geographical treatises describe important facts regarding the different stages of civilization—savage, barbarous, civilized, and enlightened—treat of the costumes worn, and give a few glimpses at social habits; pictorial illustrations of the architecture of the cities and villages, or of typical specimens of the vehicles for travel; facts regarding the agricultural products raised; cuts showing the appearance of plants and animals and natural curiosities, such as waterfalls, ravines, canons, glaciers, etc.

The average child gets some notion of the government of the several countries, and makes some comparison between the freedom of individuality encouraged under one and another of the different forms of government. He loves to hear of countries which allow the citizen an opportunity for initiative just as his own country does. Each new item regarding government, style of clothing, or peculiarities of products helps the pupil to remember the other items with which it is connected. Particularly interesting to the child are the pictures of the wild animals—the carnivorous beasts, the reptiles, and the birds—and these items especially assist his memory of the drier, but more essential, facts of geography. Even the old-fashioned geography gives items regarding the religious beliefs of the peoples of the different countries. Religion is the underlying principle of civilization. Thus we have a repertoire of the main points of sociology, namely, religious beliefs, forms of government, industrial occupations, races, costumes, and finally, what each nation puts into the market of the world from its surplus for exchange with other peoples, and what it receives in return.

There certainly is nothing of more importance that the school gives the child—next to literature with its revelation of the feelings and thoughts of his fellows

—than this matter of the division of labor and the need of each population on the face of the earth for the other populations who contribute to it certain necessities of life.

In geography the pupil comes into contact with these substantial facts that lie outside of his daily experience and yet are necessary to him for explanation of it. Good instruction in the school will, of course, draw constantly on the daily experience of the pupil in order to explain the colossal facts which are not to be found in his neighborhood. The small things and phenomena which he sees every day about his habitat enable him to learn to understand the greater phenomena which are of historical importance. He sees, for example, every day the effect of the last rain-freshet in wearing away the soil of the road on the hillside, and it furnishes the small fact by which he interprets the large fact of the wearing away of the Niagara gorge.

It must be admitted, however, that it is a mistake to send a child to the geographical investigation of his neighborhood before he has heard anything about the great facts of the world. He should be put on the investigation of his habitat in connection with the great facts which are mentioned in the geography. One approaches the explanation of great facts through little facts, but he should learn as quickly as possible to see the latter on the background of the former; hence, they should be taught together. If this is so, it is certainly a mistake to keep pupils for many weeks, or even many days, upon the study of their neighborhoods before taking up the colossal facts which are of world-importance.

Above all I should wish to call to mind again, as the central reason for its place in the curriculum, the general value of geography in giving the pupil an insight into natural causes. In early periods of the history of mankind, and among all savage peoples that are contemporary with us, the facts of nature are explained by animism, that is to say, by the interference of evil spirits. A vast network of superstition covers the face of nature from the gaze of the savage. But the child who begins to study geography begins to find one fact behind another fact.

He learns forces, and how forces make things, and how forces modify things. His knowledge constantly grows from the symbolic, which ignores the causal nexus, over to the scientific and prosaic view which comprehends the rationale of phenomena.

A fact as regarded by the infantile mind is a small matter compared with the same fact as thought by the scientific mind; for the fact is at first a little fragment broken off from a long chain of causal action by the feeble mind of infant or savage. But experience keeps making additions to the fact before and after it. It places links of causation before it and links of effect after it, and thus it grows to be a big fact.

Now the child who can grasp only so small a piece of fact, or in other words, whose facts are so small in compass, goes by external appearance and does not see the essential nature of the fact. The child sees the gun with which his father shoots. He thinks that a stick cut out in the external resemblance of a gun will do what the gun does. The essential things about the gun are the steel tube, the powder and shot, the method of exploding the powder, etc. The child's fact contains none of these items. His fact is a symbolic fact, rather than a real fact. We see that to get at a reality we must have a chain of causality. Play undertakes to reproduce the external semblance of the fact without the causal chain that makes the essential element in it. The farmer mows with a steel scythe and cuts grass. The child mows with a wooden scythe and cuts no grass. He merely "makes believe" to cut grass.

To illustrate this process of growth from symbolic to prosaic reality, consider the chain of causality involved in thinking the familiar object bread. This illustration is used by Professor Noiré. Going backward toward the origin of bread, we have the successive steps of baking; kneading the dough; mixing the meal or flour with yeast, lard, butter and other ingredients; the grinding of the grain and sifting of the meal; the harvesting of the grain, with all its details of cutting, binding sheaves, threshing, etc.; the earlier processes of ploughing, harrowing, sowing the grain; and its growth

dependent on rain and sunshine. Each of these links in the chain has side relations to other chains of causality. For example, the yeast put into the bread connects it with hops or some other ferment or effervescent; the lard connects bread with the series of ideas involved in pork raising; the salt, with salt manufacture; the baking, with the structure of the oven and the fuel. So long as anything is not yet understood, the word expressing it is a partially blind symbol.

The retrograde series toward the origin is matched by a progressive series toward the future use of the bread. There are the preparation for the table, the set meals, the eating and digestion, the sustenance of life, the strength acquired, the work accomplished by means of it, etc. The omission of the causal nexus characterizes symbolic thinking in the sense of that word as I employ it here. It is true that we commonly use the word "symbolic" in a more restricted sense, namely, the use of the material object to represent the invisible spiritual object.

The child begins by perceiving sense objects and mimics them in play. Gradually he discovers their chains of causality. Each object is in a chain of causality; it is derived from something else, and, when it changes, it passes on into something else. The child learns to think more and more adequately the object which he sees. He learns to add to it a larger and larger extent of the chain of causality that belongs to it.

III. Geography, as it is understood by the geographical societies, has a narrower signification than geography as introduced into the elementary school. It is used by the former to indicate primarily the production of the elements of difference on the earth's surface—differences of land, water, and climate—the differences that arise from the upheaval of land and from the erosion of land and its transference to the ocean, and also the differences that arise by the interaction of land and water, such as rivers, lakes, bays, straits, seas, and oceans. Besides the production of such elements of difference, geography includes for the scientific geographer the effects or influences that the peculiarities of the earth's surface have upon the life of man; such,

for example, as relate to food and clothing, their need and their supply, and such as are calculated in the course of ages to affect his physique and produce a distinct race of men, black, yellow, red, or white. In other words, the scientific geographer, as a specialist, includes anthropology with his study of the earth-surface and of its plants and animals.

But geography in the elementary school finds it necessary to go farther and include a study of the elements of civilization in so far as they are matters that characterize localities. The geographical distribution of civilization is, in fact, of the first importance to the child, the youth and the man, and hence has come to the front in all teaching of geography, from that of the early Greeks, who taught the second book of Homer's *Iliad* and made the children learn the localities of the Grecian tribes, down to the latest teaching of geography, which spends most of its time on the habitats of three or four leading nations.

Geography in the elementary school, therefore, deals much with the location and growth of cities—the transformations of nature by man for his purposes. First he transforms nature for dwelling purposes, by the building of cities, villages, and farm houses; secondly, he transforms it for the purpose of intercommunication by making roads, bridges, tunnels, viaducts, railways, and canals; and, thirdly, he transforms land by adapting it to crops, by fencing, by draining, by cultivation, by irrigation, and by connecting it with the world market by internal and foreign commerce. In other words, school geography deals not only with the geographical features in which natural conditions are seen to affect "the physical character of man," but also with the transformations which man makes upon nature with his cities, railways, canals, and agriculture.

By reason of this difference in definitions, the school geography is likely to be hindered if it adopts the literature of the geographical society without some modification. The region of the North Pole is of as much interest geographically as the region about New York, or London, or Paris, or any great center of civilization. But the child in the school

ought to be interested chiefly in the geographical centers of population. The centers that are connected with the history of great events are also, other things being equal, of more importance than the territory that has not yet been made the theater of civilization.

The emphasis which school geography lays upon the connection of places with human history suggests an educational heresy that infects to some extent the pedagogy of this branch of study. The votaries of geography sometimes become so much interested in the physical process of action and reaction in earth, air, fire, and water, that they turn away in disgust from the transformation which man has made upon the earth's surface, and especially from that part of geography which relates to the lines and boundaries of political divisions. They get so much respect for the inanimate forces of nature that to them the rational forces of man seem arbitrary and unworthy of serious attention. This gives rise to the literature of geography for geography's sake that reminds one of those writings that are said to belong to poetry for poetry's sake.

Moreover, there is a tendency on the part even of those who have given most attention to the physical elements and forces to overrate their influence upon civilization. They seek to explain, as did Mr. Buckle, the development of the institutions of society by climate, fertility of soil, picturesque scenery, earthquakes, and such matters which are thought to have a controlling effect in determining the character of the populations of countries.

This view makes geography in some sense a substitute for history. If historic development is an effect of geographic conditions and forces, it is, of course, a mistake to consider history an evolution proceeding through a growing sense of the ideal of freedom, and its realization in theory and practice. The great German, who said that the world-history is the progress of man into consciousness of freedom, must have been mistaken. The evolution of national ideas, beginning with Eastern Asia, where the state is everything and the individual next to nothing, moving westward to the nations

of Europe and America, where the state is great in proportion to the greatness of its individuals—this progress certainly must be an illusion because it cannot be explained from geography. This bouleversement of ideas on the part of enthusiasts in the study of physical processes is enough to prove that geography is not a good substitute for history.

History shows the inward development of social and political ideas and their realization in institutions. The geographical conditions furnish no more than the mode of manifestation. Man reacts against nature and transforms it into an instrument of expression and a means of realizing his rational self. Geography does not deal with the evo-

lution of human freedom, except in so far as it shows the results of that freedom in the modifications which man has made to adapt nature to his purposes. The cold freezes the water into snow, but it does not make the Eskimo's snow hut. The river divides the populations of a country, but it does not make the bridge, the ferry, and the tunnel that unite them.

Specialization in science leads to the division of aggregates of knowledge into narrow fields for closer observation. This is all right. But in the course of study in the common school it is proper and necessary that the human interest should always be kept somewhat in advance of the physical.

INDIVIDUAL INSTRUCTION IN THE PUBLIC SCHOOLS.

JOHN KENNEDY,

Superintendent of Schools, Batavia, New York.

It was a great day in the history of agriculture when the first McCormick reaper went clicking into the grain. It is no reflection on the great invention to say that people would have to be very hard up for machinery who would consent to use that first reaper to-day. Mr. McCormick knew that his great invention would have to be subjected to the severe test of use, and that many corrections would need to be made before it would accomplish in practice all that it contemplated in theory. The first horses must be overtaxed with side-drafts and much of the first grain must be trampled down by the horses and ground down by the wheels.

The great inventor was not surprised to find the machine pinch at many a point; he was expecting it and was eagerly awaiting for experience to locate the pinch. Then he flew to the correction, and he and Deering, and Wood, and Johnston, and Osborne, and others have been steadily correcting ever since. Forty-five years of correction applied to a great invention has made the American reaper sing merrily in the fields and do clean

work with a minimum of force.

It was a great day for education when the graded-school system was invented to meet a state of things that had outgrown the teacher's knee and pen-knife. Education had suddenly become wholesale, and retail methods would no longer apply. The great man was around who took in the new conditions and invented that wonderful instrumentality the graded school. There was no limit to the grappling power of this wonderful new machine; there were millions of children to be reached and it reached them. So far as to reaching them it was a triumph. But in so far as it failed to reach their needs it was a failure. In so far as it reached them to their detriment it was a failure. In so far as they were the trampled down and run over ones it was not to their advantage.

It is no reflection on the greatest invention in the history of education to say that time and the test of use have revealed some defects in it. Had they not done so the invention would have been not only one of the wonders of the time

but one of its miracles. The surprise is that the defects have not been anticipated, sought out, detected, diagnosed, and corrected. The invention of the graded school was about contemporary with that of the reaper, and it was quite as much of a marvel. Why does not the parallel hold throughout? Why are we not able to report forty-five years of acute observation of its workings in actual use and forty-five years of triumphant correction of its defects? Is it not the crude original graded school that is still at work? Whether or not the defects were ever anticipated and looked for, it is only just to say that some of them have been felt and partially recognized. It is also only just to say that some distinct attempts have been made to remedy them. But it seems to me that in most cases the diagnosis has been incomplete or even incorrect, leading to changes that have not been remedies. In fact I think that the changes have in some instances tended to intensify existing evils and even to create new ones. It is only just to say that we have on record some instances of correct diagnosis; but unfortunately they have been followed by a treatment that did not prove remedial.

The graded school is founded on many correct assumptions. The division of labor is a mighty principle of economy and efficiency.

It is also correct to assume that children get a wholesome stimulus from numbers and that the teacher broadens her work by extending it over a multitude. Of this broader and more strenuous work every child gets the benefit. To abandon the graded school would be to deprive children of needed stimuli, to take much of the life out of teaching, and to render public education in towns and cities almost impracticable.

On the other hand the original graded school was founded on assumptions that are in my opinion fatally incorrect. It assumed a uniformity of nature in children that never did exist, and never was intended to exist. In a sense children come to school; and in so far as they are children they may be organized, classified, and dealt with wholesale; and all the broader economies may be reached. But in an even stricter sense they are not

children that come to school; they are little individual lives. And it seems to me that the needs of those individual lives can be reached only by individual attention. A scheme of educational work adapted to child nature must be supplemented with a scheme of educational work adapted to the nature of the child. I believe that this is the saving formula of education throughout its elementary and secondary stages, and throughout a portion of the college course. And I believe that any departure from it in the direction of purely mass-teaching is attended with very great peril. I do not believe that any purely wholesale system of education can go on without its saddening tragedies. And I mean what I say. The undoing of a life is a tragedy, whether that undoing be physical, intellectual, or moral; and I think that I have seen tragedy of the three forms caused by the operation of the graded school. I believe that volumes might be written in amplification of this statement, and in substantiation of its truthfulness. And when those harrowing volumes are written, I hope that their interest will be purely historic, that they will relate to evils that no longer exist. I will say here in brief that we know that worryment kills physically, and that discouragement kills intellectually. And we ought to know, I think, that the graded school tends to produce both worryment and discouragement. And close observation ought to convince anyone that moral perversion has its root to a great extent in bad intellectual conditions.

The children are not the only beings thrown into worryment by the operation of the graded school; consequently they are not the only victims.

Another fatally incorrect assumption in the graded school is that of uniformity of circumstances and environment. The circumstances and environment of children are as various as the leaves of the forest; circumstances and environment enter as important factors into the education of each child. Another fatally incorrect assumption is that of continuously unchanged circumstances and environment affecting the individual child. If a brief spell of sickness throws him from the front to the extreme rear

his circumstances are very decidedly changed. Any of a thousand accidents at home may completely change his environment.

I take it that the first thing that we must do in order to correct our machine, is to correct our philosophy. But an absolutely flawless philosophy only brings us to the threshold of observation. And only through this well grounded observation can we hope to eliminate the evils of our schools, and perfect the noble process of teaching.

Our schools may be compared to a logical formula; in so far as our children have resemblances they may be massed and classed, but only in so far. By this we get all the benefit of organization and all the momentum of numbers. In so far as the children have differences they must be separated in our arrangement and treatment of them, and just so far.

If we recognize infinite variety in some uniformity, then we must provide for the free play of that variety under uniformity. Any check to that variety is violence; any improper demand on that variety, or individuality, is violence. Violence is some stage of injury; and the end of injury is death. It may be the death of the body; and I fear that it often is. It may be the death of ambition; and I know that it often is. It may be the perversion or death of character; and I know that it often is.

I have grown to think that it is false philosophy that assumes that education must have its martyrs; martyrs among the leaders, martyrs among the followers. I believe that the busiest work in education should promote physical improvement in both teacher and pupil. There are compensations in good teaching that give a full return for every expenditure of vitality; and the greater the expenditure of well applied energy the greater the compensation. The collapse of a teacher or pupil is I think evidence *prima facie* that the machinery is out of order.

Let us resort to another figure. The forced march to a distant point develops the inequalities in the staying power of soldiers; first one, then another collapses until the roadside is strewn with those who are awaiting the tender mercies of the guerillas. And it has been thought

that this is one of the necessary sacrifices of war. Perhaps it is; but the officers of the small American army rushing to the relief of the besieged legations in Peking did not think so. When the Americans swung into line and performed deeds that called forth the plaudits of the entire world, every American soldier that started from Tien-Tsin was in that line. The collapsing had begun, however, regardless of discipline, and regardless of the awful fate that awaited those who fell into the hands of the Boxers. The officers got all those collapsing men into the distant city and into heroic action by flinging military methods to the winds and resorting to individual encouragement and individual appeals: "Be a man, my man." "You would not miss the fight, would you?" "You would not disgrace America in the eyes of these European armies, would you?" "We can't stand that, my boy." "Let them see that we can hold out as well as any of them and fight as well as any of them." When the drooping straggler pulled himself up to the great resolve he was not only there on time but was one of the greatest fighters there. The officers won by recognizing individuality in uniformity, and with drooping men they reaped the finest laurels of the century. An American who chanced to be in Rome at the time, said that he never before felt such a thrill of patriotic pride and joy as when he saw the newspapers of all languages heartily rehearsing the heroic deeds of the "9th Americans."

It is a long march, and it has been a forced march, from our first primary department to our high school. Do they all respond to roll call at that threshold? Ah, no; great regiments have dwindled to very small companies, and companies have become less than corporals' guards. I think that I have seen people contemplating the situation with complacency and have heard them say that depleted ranks are the necessary and inevitable result of the educational march. I am not quite sure that they are correct. I would want to see the Peking method have a fair trial and full trial in education before I could accept any such conclusion. I feel like demanding the rest of the children, those beautiful little sol-

diers that enlisted so willingly, so heartily, in this great department of their country's service. Can that little bewildered, reeling girl be made hopeful, confident, and strong? I think she can. But it will be by the Pekin method. It will not be by orders, reproaches, and threats from the front. It will be by a cheery word at her side, and by a little judicious guidance that recognizes the real nature of her trouble. Can she be saved from going home in convulsions of discouragement bordering on the convulsions of illness? I am sure that she can. Can that silent, shrinking boy be kept from the feverish tossing on his bed, that ends at last in real fever? I have faith that he can, that he can be won to hope, health and victory. Can that other boy be won from the sullen obstinacy that is breaking up the discipline of the room and the good understanding with the home? Can he be made a willing, cheerful, and successful member of the school? I know that he can, and that he can be caused to lose all tendency to misconduct and all interest in evil associations. But it is only by the Pekin method. Can he be saved from the corrupting street to a noble and forceful manhood? I am sure that he can, but only by individual guidance and cheer. Can that other indolent and spiritless youth be aroused to productive activity? He can, but not by sarcasm shot from the front of the class, not by humiliating exposure or punishment, not by force of any kind, but by the intelligent and discriminating effort that reaches in to the torpid springs of his nature and awakens them to healthy action.

I believe that every class may be relieved from nearly every drag and clog, that every home may be relieved from nearly all its misery, that nearly every child may be well educated in and through the framework of the graded school. I believe that the graded school can be made almost absolutely harmless and mightily productive, by making suitable provision for reaching the individuality of children.

What that suitable provision is, is the practical question confronting the education of the world.

For three years we have been silently

experimenting on the problem of the relief of our graded schools, and while we would not say that we have solved it, we would say that we feel that we are in the way of solving it. While some of the above philosophy precipitated the experiment, much of the above philosophy has been the result of experiment. A philosophy that results from experience is likely to be an approach to wisdom. At least experience puts some solid ground under one's feet instead of leaving him to walk on air. We have been for nearly three years applying individual instruction as the supplement and corrective of class work, and we have been not only pleased with but amazed at the results. The general benefits sought seem to have been secured; and particular unanticipated benefits have been manifesting themselves almost in legion.

Our formula is to provide class work and individual instruction in exactly equal proportions, and our formula seems to get pretty close to the line of correct organization. I do not mean that every child receives class drill and individual drill in equal proportion. Our experience has been that individual drill tends toward its own elimination as far as individual children are concerned. With the individual child individual drill is occasional and exceptional, while class drill is permanent, and becomes at last his exclusive regimen. I mean that half our teaching force is reserved for the purpose and the emergencies of individual instruction. And we feel that just that amount of teaching force is needed for expenditure in that form. We do not employ any more teachers than we would had we continued the old system. Our financial expenditure is not increased but rather reduced by the change.

And we are so happy in the results reached that we would all shudder at the prospect of a return to the old abandoned grind. We have saved the very valuable framework of the graded school and get all its benefits without the harrowing casualties with which its operation is often attended. We get more scholars and vastly better scholarship than we did under the old system, and with absolutely no wrecking of teachers. Our experience

seems to have demonstrated that it is not dangerous to teach school and teach well. Disorder, indolence, and despair have apparently vanished, sickness has been reduced to its lowest terms, and attendance has approached the maximum. Our children seem to think that school is the pleasantest place on earth, and our homes report an unwonted flood of sunshine. Our homes are real homes now, and not miserable extensions of the school.

The rate of increase in our high school is already far in excess of the rate of increase in our first primary grade. What limits this tendency will reach, is one of the questions of the future. And our high school is gaining in stamina as well as numbers; the tendency of choice is toward the severer courses.

This is not a mere question for academic debate. I know no matter that is more

practical; I know nothing that more nearly touches the lives and happiness of the people; and I look to see the people aroused on this matter at an early day. I believe that on sanitary grounds alone education will be compelled to reorganize; sanitation is looking for the monsters in the school-room, and will detect this greatest and most destructive one of all, class-teaching unrelieved by individual instruction.

But education must reorganize on educational grounds. If education is to take any pride in its own achievements it must abandon pure class-work. The graded school system cannot be proud of the paltry numbers it turns out; nor can it be proud of the extent to which it is transforming the colleges into eleemosynary institutions.—*Journal of Pedagogy*.

THE RIGHTS OF DONORS.*

ALTON B. PARKER,

Court of Appeals, Albany, N. Y.

I presume it is scarcely incumbent upon me to declare myself to be quite as uncompromising a friend and lover of freedom as any man upon earth. I pronounce for the freedom of man in every walk in life, complete in so far as the exercise of his individual liberty is not subversive of his obligations to society and the rights of others. I assume that every teacher and professor has the fullest and most complete freedom conceivable of expression of his opinions upon all proper subjects to his pupils, and of propagation of such doctrines as he may have accepted as true—unless he has voluntarily entered into such relations and obligations as in some way curtail his complete freedom—if he is acting as an independent teacher, has founded his own school, secured his own scholars, or has reserved to himself independence in the service of his employers and inculcates nothing contrary to

the laws of the land or destructive of social order. I assume that, under such conditions, he may teach what he pleases. "Truth is mighty and will prevail," and if a professor shall have discovered, or in any way acquired possession of, a scheme that he deems essential to be known of men in order that their political, social, economic or religious regeneration may be effected and their happiness and condition in life increased and improved, why should he not go forth and teach it, even though he suffer contumely and ostracism, believing, as he does, that his cause is pregnant of consequences glorious for mankind? If he is imbued with the true teaching spirit—and that is one of the essentials to true success as a teacher—mere details of salary and the like can weigh nothing with him in comparison with his lofty idea of duty. Under those

*A paper read before the Association of Colleges and Preparatory Schools in the Middle

States and Maryland, at Syracuse, N. Y., November 29, 1901.

circumstances he is entitled to freedom of expression, absolute, within the limits I have indicated.

So much for independence of teaching by those who make their own fields, or have full liberty to cultivate in their own way the fields to which they are called by others.

And as to the founders of and donors to institutions of learning, whose sole business in life—money-making—may not have especially qualified them to determine what should be taught in colleges and universities, I am in favor of their having the like complete freedom within their province which I accord to teachers within theirs—freedom to insist upon it that doctrines they believe to be true, and for the propagation of which they have expressly and avowedly founded the institution, or endowed chairs, shall be taught in such institutions. I venture to say that nobody will be found to gain-say that proposition, limited always by the implied condition that none of the favorite doctrines of founders shall be taught if they are in derogation of law or good morals. It may be said that such institutions would not be universities; but institutions conducted on that line are called universities, and argument might be made to show that, in those which are universities in the widest sense, much of the instruction is special and not universally accepted as true. However, in such institutions as I have just indicated, when a full professor becomes a member of the faculty under an agreement for a longer or shorter term of years, he does so with a clear conception of what he is to teach and presumably with a desire or personal preference to propagate the doctrines held by his employers. Under such circumstances, I assume no one will deny the right and propriety of the founders or the donors requiring that the professors engaged shall consistently teach the chosen doctrines, or, in case a professor should at any time during the term of his engagement, owing to his having received new light, refuse to carry out his agreement and should depart from his instructions, the right and propriety of their insisting upon the governing board demanding the professor's resignation.

It would be very improbable that such

an institution would acquire as patrons any who would be likely to interpose objections as to the method of treatment by any of the faculty of any of the branches of study taught in the institution. Everybody concerned would understand exactly what was required of him, and should any of the professors experience a change of heart or mind in regard to any of the subjects of study under their charge, why, they themselves would know when it was time for them to proffer their resignations, and thus the contracting parties would be satisfied and all opportunity for unpleasant publicity would be avoided. Will anyone seriously question the right of donors and patrons, in institutions thus organized, to dictate the methods that should be employed and the policy that should be pursued in the cultivating or molding of the students' opinions by the professors engaged for the purpose?

But now I come to the burning question. In an institution of learning founded and supported either on individual bounty or the appropriation of public moneys, for the purpose of instructing our youth in the branches of learning usually embraced in the university curriculum, shall a full professor, permanently employed to teach in such institution, be permitted to enjoy unqualified freedom of opinion, with the right to give it expression in the classroom, or has a donor, or the students' parents, whose gifts and patronage support the institution, any right to interfere and demand for any reason a modification of such complete freedom?

To my mind it seems a little singular that any controversy should have arisen regarding the true solution of this question. An examination of the published opinions of the professors on the subject, however, shows me that the majority of them agree that there is but one side to the question, and claim for themselves the most unqualified freedom in the premises, although the fact that there are two sides to the question is proved by the resignation of many professors within the last four years from the faculties of some of our principal universities and colleges on account of difference of opinion as to what limitations, if any, should be placed

upon their freedom of expression. I am aware that in Germany, the habitat of the university and professor, the liberty of the teacher to freely exercise his function has long been known by a specific name—*Lehrfreiheit*—but whether the question of the absolutely untrammelled freedom of the teacher to promulgate undesirable doctrines, or the unqualified right of the donor or patron to interfere with such freedom, has ever arisen in Germany, I cannot say. There, as here, however, the teachers maintain their right to absolute, unconditional freedom of investigation and of teaching, and of giving free expression to their opinions, even though offensive to others.

While I do not profess to know what may be the consensus of opinion of our professors, in every case, I believe they deny a donor's right to interfere, as donor, and try to prevent a professor's free expression in the classroom of his views as a partisan of a political party; or his free expression as to the soundness or unsoundness of untested theories and speculations indulged in by economic and other reformers; or his propagating as truths ideas that have never been reified and concerning which there is divergence of opinion among those who have especially concerned themselves with such ideas; or his adopting bizarre methods of imparting his teachings to his pupils in the classroom. While there are other illustrations, these will suffice to indicate to you how far extend the claims of professors as to their freedom from interference in their work, and it is perhaps unnecessary for me to remark that the claims would seem to include a professor who would exercise his calling without any reference to the requirements of common sense—a quality, by the way, that it is possible may be lacking in a man most critically educated and of sterling integrity, but which, nevertheless, to my mind, is absolutely essential to render a man's labor effective in our practical, workaday world.

Some of our professors go to the extent of declaring that not alone a donor, but even the state, has no right to interfere with their liberty of expression. Now, that seems to me to be going a great

way; for, if that declaration be justified, we can see how society may be placed at the mercy of those insane criminals who are seeking its destruction; namely, the anarchists. The society of anarchists is largely comprised of Russian students, and among them are men and women educated to a high degree, and if some of them, by concealing their true characters, should secure positions as professors in our schools and colleges, they could with impunity cast aside their masks, when once installed, and sow the seeds of anarchy in the minds of our sons and daughters. Now, would the most pronounced advocates of the professor's complete freedom of expression deny the right of the state to proceed criminally against such persons, who, under the guise of propagating advanced ideas of social or economic reform, would teach the doctrines of murder, of negation of state government, of the "absolute freedom of individual expression" and individual action, promising that from such a chaos of "free wills" there must voluntarily ensue order, social and economic equality, and a millennium? It will not do to say that, whatever the state might do, the donors or patrons of the school must wait until the term of such professor's engagement has expired in order to terminate his connection with the institution. It might then be too late, and in the meantime the seed that he has been permitted to sow may have taken root and in the future may bear fruit.

In a case such as I have outlined, which I acknowledge is an extreme illustration, it does not appear to me possible that there can be any diversity of opinion as to the right of a donor or patron to interfere with the professor's freedom of expression upon the very first intimation of the dangerous tendency of his opinions. But I do not think it necessary to adduce so extreme an instance in order to find reasons for the right of intervention, in a certain degree, on the part of the donor. I have serious doubts as to whether it is within the true province of a university to inculcate as learning any theory whose truth or falsehood can be disclosed only through its practical ap-

plication in the dim future, and as our keeping abreast of this progressive age in our educational plants and faculties depends so much upon the bounty of individuals, I cannot understand why such donors should not be permitted to exercise the privilege of requesting the members of the university faculties to confine themselves to teaching things that have stood some tests of time, and concerning which the best cultivated opinion of the age is favorable. Many theories—social, political, economic, and financial—have been advanced and for a time have absorbed public attention, but in a few years have dropped out of sight and their advocates have been forgotten, or have adopted new theories that they seek to propogate with all the zeal that marked them as the apostles of the discarded ones. Perhaps some of the professors who now claim complete freedom of expression of opinion were students when some of the abandoned theories were the vogue, and possibly they were infatuated with their plausible presentation and thus lost much valuable time in their study. If there are any such professors, who sought for solid form and useful substance amid the hazy dreamings of theorists and were thus led to waste their time and energy by reason of free expression of opinion on the part of their professors, do they not think a greater meed of justice would have been measured to them if some practical donor of the school that they attended had put a veto on the professor's expressions? It does not seem to me that a negative answer to this question is possible. And it does seem to me that a professor who has suffered such an experience should be very careful about demanding the right to absolutely free expression of opinion for all professors, although he himself may be sufficiently conservative to per-

mit of his enjoying the right without danger to the rights of his pupils and of the supporters of his college.

You will see, therefore, that I am in favor of adopting the golden mean in this conflict of rights. Outside of the classroom the professor should enjoy that absolute freedom of expression through the various publications and upon the platform which manly men in every walk in life insist upon and which harmonizes so perfectly with the spirit of our institutions, and before the class he should be permitted the utmost liberty in expressing his opinions upon all matters that come within the province that a university can legitimately occupy—all that has been taught, and all that has been done, and has stood the test of time and is accepted by those who represent the highest cultivation of our present civilization. But with the indoctrination in the minds of students of such social, political, economical, or religious ideals as tend to subvert the purpose of the founders or directors of the chair he occupies, or which can have reference only to a more or less distant, revolutionary future, the professor and university should have nothing to do. Therefore, when in opposition to the wishes or without the consent of the supporters of the institution, any of the faculty persists in a course that must tend to impress upon the tender minds of the youth under his charge theories deemed to be false by the foundation whose servant he is, or which, if not strictly false to it, are deemed so by a vast majority of the most intelligent minds of the age, it seems to me that he has abused his privilege of expression of opinion to such an extent as to justify the governing board in terminating his engagement. — *Educational Review*.

THE EDUCATION OF THE YOUNG AMERICAN FARMER.

By W. M. BEARDSHEAR,

President Iowa State College, Ames, Iowa, and of the National Educational Association.

Among the marvels of progress at the opening of the new century is what the state colleges of agriculture and mechanic arts are doing for the farmer and the mechanic. The young farmer is given a thorough scientific acquaintance with the soil, the plant, the animal and their commercial relations. He learns the characteristics of various soils, the methods necessary for the successful tilling of each, and meteorology in relation to all. He is taught the choicest methods in raising the standard field crops. Each season he passes through experimental investigation and observation of raising forty or fifty varieties of wheat, as many and more species of grasses, through numerous experimentations with corn, and so on throughout the range of domestic plant life. In agricultural chemistry he studies the composition and nature of the soils, analyzes the plant life and the foods in feeding. In the botanical laboratories he studies noxious weeds and the best means of their destruction. In entomology he studies the life and habits of injurious insects, their effect on plant and animal life and the most suitable remedies for their ravages. The young farmer is taught the laws of heredity, selection and variation as fundamental to stock breeding and rearing. The most prominent of these colleges keep on hand only pure bred animals as object lessons of the several breeds for the student in animal husbandry. He is taught the comparative merits of these breeds. Mutton and wool sheep, the dairy cow, the best beef-producing animals are studied with a sole view of determining what is advisable and desirable for the farmer. New questions arising like that of feeding swine for bacon or for lard, the most suitable age for their marketing, and the best methods of their feeding are pursued most faithfully. There is a complete sys-

tem of merit points for the various kinds of animals. These he studies most thoroughly in connection with the live animal in the recitation room, and though young in years becomes an expert stock judge, able to compete with and frequently surpass gray-haired men who have spent their lives in the study of these animals. The practical money side of raising these animals is followed with marked painstaking and eminent results. Young animals of the leading breeds are estimated from the sire and the dam regarding the cost of food, handling and worth of product, all the way to the butcher's block and the cash results. The relative merits of the dairy animals, with their cost per day, their reward of profit and permanent value to the owner, are determined with remarkable skill and clearness. The losing money battle over a poor animal of any kind is portrayed, and the relative merits of animals of varying breeds for specific purposes, like the sheep for mutton or wool, hogs for bacon or lard, cattle for milk or beef, horses for drafting, roading or speeding, are all scientifically determined and the results tabulated for the coming farmer. In the dissecting room the anatomy of domestic animals is studied as carefully as that of the human subject in the medical colleges. The causes and remedies of animal diseases are gone over thoroughly, contagious diseases are largely checked, and many minor diseases affecting domestic animals are brought under reasonable control. Herein men are trained for government service in meat inspection, inspection of vessels, cars and yards against infectious diseases, and for the securing of proper sanitary conditions in stock yards, and all the rapidly widening work of the United States Bureau of Animal Husbandry.

Intermingled with these studies is a

large quantity of liberal learning in languages, sciences, history and philosophy. Through the efficient management of Hon. James Wilson, United States Secretary of Agriculture, approved graduates of the best of these colleges are given post-graduate work in connection with some bureau in the Department of Agriculture at Washington, D. C., with a sufficient annuity to pay their expenses. In a word, the educated young farmer of the day, graduating from one of the best colleges of agriculture and mechanic arts of this country, has an education comparable with that of the young man entering any one of the professions.

These colleges also are taking prominent part in the higher education of woman. They are giving her equal advantages with her brother for a better education and a completer life. In domestic science the sanitary conditions of the full life in the home are most thoroughly taught. Intellectual and practical home making and home keeping are taught by actual demonstration in the Department of Domestic Economy. They are taught regarding the location, construction, finishing, furnishing, lighting, heating and keeping of the home; the buying, analyzing, testing and serving of foods; the selecting, designing, making and keeping of the clothing. All this work is intermingled with the liberal arts and sciences through a four-year college course, fitting a young woman for any station of life, from kitchen to the White House, after graduation.

The term "alternate husbandry," referring to the rotation of crops, had its rise in the past century. With the opening of the present century there is a new "alternate husbandry" that cultures the farmer as fundamental to the best evolution of the plant and the domestic animal. Scientific agriculture helps to make ten acres do what one hundred acres used to do. It develops the possibilities of a better soil, a larger plant, a fuller harvest and a fatter pocketbook. It teaches the breeding of better animals and more profitable markets. It makes twenty-cent butter out of the same material as the former twelve-cent butter. It harmonizes the points of the plow and the pen. It merges country and town, with a betterment to both. The telephone, the electric railway, the daily rural mail and express are now within the reach of many farm homes. The rural schools will soon take on a fundamental trend in elementary agriculture, horticulture and domestic science. The time is in sight for many now living to find the educated farmer among the most intelligent, thrifty and independent of American citizens. Thomas Jefferson claimed that the greatest service a man could do his country was an introduction of a useful plant, especially a new bread grain. The colleges of agriculture and mechanic arts are introducing the choicest bread grains ever nurtured on American soil—the educated young farm man and woman.—*Education.*

COMMERCIAL EDUCATION.

Commercial education is the most important innovation in university training that has been made within many years. The first serious proposal to include such work in the course of study was made less than ten years ago in the Senate of the University of Chicago by Professor Laughlin, but the idea commended itself so warmly to educators that schools of commerce have already been established

in the Universities of California, Wisconsin, Michigan and Pennsylvania, in Ohio State and New York Universities, and in Dartmouth College. Some of these institutions now offer more elaborate programs than Chicago, where the movement had its origin, and it is highly probable that a considerable number of other universities—Columbia among them—will soon follow the precedent and

make full provision for instruction of this nature.

The new movement has thus attained in its first decade dimension that make it a matter of much interest not only to academic men but also to the increasing number of American parents who desire to give their children college educations. But despite the favor with which they have been received, commercial courses cannot yet be regarded as entirely past the experimental stage, and it is not unnatural that many persons should still distrust them. Of these doubting spirits there seem to be two classes—one of men in whom the conservative traditions of academic life are so strong that any change in the curriculum seems to them to threaten a lowering of the standard of college work; the other of practical men who think it impossible to teach business in any school. To both these classes the statement made by Professor Laughlin regarding the aims and methods of "The New Education" a fortnight ago should prove of great interest.

As against the view that courses on commerce will prove of less educational advantage than the traditional work on the classics, Professor Laughlin urged that the primary end of all college training is to teach students to think for themselves, and that this end can in large degree be attained by the use of one subject-matter quite as well as by another, provided both are treated in a rigidly scientific manner. He pointed out that similar objections were made a quarter of a century ago when economics and political science were gradually winning their way into the curricula of American colleges, but that these subjects have so abundantly justified their right to inclusion that no opposition is made to them nowadays. In the same way he confidently anticipates that the distrust of courses on commerce and administration will gradually yield when time has been given for them to be known by their fruits.

The second class of objections—that business cannot be taught in schools—rests primarily on a misapprehension of what is intended. Of course, no one fancies that a boy can learn banking, railroading or journalism by any other means than practical experience. But that is

not the real point. The important question is whether a boy will make a better banker, for example, with business experience alone or with business experience plus a careful preliminary study of the principles of money, credit, and finance, and of the banking systems of his own and other countries. There are probably few men so intensely "practical" that they can see no utility in this training as a preliminary to practical experience. Opposition from this side is, therefore, likely to be as transient as opposition from the other, when men grasp the idea that the work of the colleges of commerce is offered not as a substitute for experience but as a preparation for it.

Confidence in the practical usefulness of the work is likely to be increased by the fact that the instruction is not left entirely in the hands of men of purely academic training. Professor Laughlin himself served for a time as secretary and president of a Philadelphia fire insurance company. This autumn the University of Chicago organized a course of open lectures in which seventeen of the city's most successful business men have agreed to take part. It is interesting to note as in some measure indicative of the usefulness of college training of any kind that five of these men have bachelor degrees, one is a doctor of philosophy, and one a doctor of laws.

There remains one important reason for organizing schools of commerce upon which Professor Laughlin dwelt with emphasis. In a democratic country the universities ought to provide so far as possible for the needs of all classes of students. There is at present a strong inclination in young men to prefer business pursuits of some kind to the learned professions or scientific work. Young men with such inclinations find in the course of the old-type college little that appeals especially to them. As a consequence many highly capable youths stop attending school on receiving their high school diplomas. If the universities desire to help such young men and to get for themselves the stimulus which an energetic student body always gives they must provide an opportunity to study the things in which this class is interested.

The establishment of schools of commerce in quick succession in so many universities, therefore, ought not to be regarded as a mere educational "fad."

Quite the contrary, it ought to be viewed as a sensible adaptation of our educational system to the needs of American youth.—*Editorial in the Chicago Tribune.*

PLANTS AND THEIR ENVIRONMENT.

PROFESSOR N. M. FENNERMAN,

University of Colorado, Boulder.

The expanding sphere of geography is well illustrated in the new impetus given to the study of plant ecology, the study of plants in their relations to environment. This study has been brought to its present stage chiefly by European botanists who had studied the plants much but the environment little. Nevertheless, we owe to Warming, of Copenhagen, the principle of the most universal application in ecology. This principle is that the distribution of plants, and therefore the formation of plant societies, is controlled primarily by the water content of the soil. The details of the distribution of ground water are, of course, dependent on topography and it is only recently that topography has come to be studied from the dynamic point of view and seen to be ever changing through a definite series of features and approaching definite ends. Starting with these modern principles of topography, Dr. Henry C. Cowles, of the University of Chicago, has made a distinctly American contribution to the subject of ecology.

If any type of topographic features is passing through a definite series of changes its flora must do the same. He calls his work physiographic ecology, a name which aptly suggests that all his observations on plant societies are referred to a topographic basis. His most recent publication, "The Plant Societies

of Chicago and Vicinity," is issued as Bulletin No. 2 of the Geographic Society of Chicago and also published in the *Botanical Gazette* of February and March, 1901. The topographic forms are treated in series according to their genetic relations. Thus it is well known that a pond will be succeeded by a swamp and that by a plain which may be forest or prairie. One of his series therefore is the pond-swamp-prairie series. There are also the ravine-bluff-floodplain series, the hill series, the lake bluff series and the beach-dune series. The test of a system of scientific principles is its ability to predict results from a given set of conditions. Applying this test to these new developments in ecology, probably no one has been more surprised than Dr. Cowles himself at the marvelous faithfulness with which a given type of plant society is found to accompany a certain stage of a certain topographic feature over a wide range of latitude. Studies have been carried on in widely separated states and all illustrate the exactness with which a plant society reproduces itself wherever the physiographic conditions are the same. So much for the contribution which modern physical geography has made to botany. The reciprocal advantage to geography is obvious.—*The Journal of School Geography.*

THE RED HEADED WOODPECKER.

PERHAPS no bird in North America is more universally known than the Red Headed Woodpecker.

He is found in all parts of the United States and is sometimes called, for short, by the significant name of Red-Head. His tri-colored plumage, red, white and black, glossed with steel blue, is so striking and characteristic, and his predatory habits in the orchards and corn-fields, and fondness for hovering along the fences, so very notorious, that almost every child is acquainted with the Red Headed Woodpecker. In the immediate neighborhood of large cities, where the old timber is chiefly cut down, he is not so frequently found. Wherever there is a deadening, however, you will find him, and in the dead tops and limbs of high trees he makes his home. Towards the mountains, particularly in the vicinity of creeks and rivers, these birds are extremely numerous, especially in the latter end of summer. It is interesting to hear them rattling on the dead leaves of trees or see them on the roadside fences, where they flit from stake to stake. We remember a tremendous and quite alarming and afterwards ludicrous rattling by one of them on some loose tin roofing on a neighbor's house. This occurred so often that the owner, to secure peace, had the roof repaired.

They love the wild cherries, the earliest and sweetest apples, for, as is said of him, "he is so excellent a connoisseur in fruit, that whenever an apple or pear is found broached by him, it is sure to be among the ripest and best flavored. When alarmed he seizes a capital one by striking his open bill into it, and bears it off to the woods." He eats the rich, succulent, milky young corn

with voracity. He is of a gay and frolicsome disposition, and half a dozen of the fraternity are frequently seen diving and vociferating around the high dead limbs of some large trees, pursuing and playing with each other, and amusing the passerby with their gambols. He is a comical fellow, too, prying around at you from the bole of a tree or from his nesting hole therein.

Though a lover of fruit, he does more good than injury. Insects are his natural food, and form at least two thirds of his subsistence. He devours the destructive insects that penetrate the bark and body of a tree to deposit their eggs and larvae.

About the middle of May, he begins to construct his nest, which is formed in the body of large limbs of trees, taking in no material but smoothing it within to the proper shape and size. The female lays six eggs, of a pure white. The young appear about the first of June. About the middle of September the Red Heads begin to migrate to warmer climates, travelling at night time in an irregular way like a disbanded army and stopping for rest and food through the day.

The black snake is the deadly foe of the Red Head, frequently entering his nest, feeding upon the young, and remaining for days in possession.

"The eager school-boy, after hazarding his neck to reach the Woodpecker's hole, at the triumphant moiment when he thinks the nestlings his own, strips his arm, launches it down into the cavity, and grasping what he conceives to be the callow young, starts with horror at the sight of a hideous snake, almost drops from his giddy pinnacle, and retreats down the tree with terror and precipitation."





BLUE MOUNTAIN LORY.

THIS bird inhabits the vast plains of the interior of New South Wales. It is one of the handsomest, not only of the Australian Parrots, but takes foremost place among the most gorgeously dressed members of the Parrot family that are to be met with in any part of the world. It is about eleven or twelve inches in length. The female cannot with certainty be distinguished from her mate, but is usually a very little smaller. The Lory seldom descends to the ground, but passes the greater part of its life among the gum trees upon the pollen and nectar on which it mainly subsists. In times of scarcity, however, it will also eat grass seeds, as well as insects, for want of which it is said, it often dies prematurely when in captivity.

Dr. Russ mentions that a pair obtained from a London dealer in 1870 for fifty dollars were the first of these birds imported, but the London Zoological Society had secured some of them two years before.

Despite his beauty, the Blue Mountain Lory is not a desirable bird to keep, as he requires great care. A female which survived six years in an aviary, laying several eggs, though kept singly, was fed on canary seed, maize, a little sugar, raw beef and carrots. W. Gedney seems to have been peculiarly happy in his specimens, remarking, "But for the terribly sud-

den death which so often overtakes these birds, they would be the most charming feathered pets that a lady could possess, having neither the power nor inclination to bite savagely." The same writer's recommendation to feed this Lory exclusively upon soft food, in which honey forms a great part, probably accounts for his advice to those "whose susceptible natures would be shocked" by the sudden death of their favorite, not to become the owner of a Blue Mountain Lory.

Like all the parrot family these Lories breed in hollow boughs, where the female deposits from three to four white eggs, upon which she sits for twenty-one days. The young from the first resemble their parents closely, but are a trifle less brilliantly colored.

They are very active and graceful, but have an abominable shriek. The noise is said to be nearly as disagreeable as the plumage is beautiful. They are very quarrelsome and have to be kept apart from the other parrots, which they will kill. Other species of birds however, are not disturbed by them. It is a sort of family animosity. They have been bred in captivity.

The feathers of the head and neck are long and very narrow and lie closely together; the claws are strong and hooked, indicating their tree climbing habits. Their incessant activity and amusing ways make these birds always interesting to watch.

THE EDUCATIONAL VALUE OF PLAY.

DR. JOHN E. BRADLEY.

The late President Barnard, of Columbia University, in answering the question, "How was I educated?" begins by raising the counter-question, "Was I, in fact, ever educated at all?" Not that he had not had teachers enough, but that their relations to him had been such that he doubted whether they had really educated him. While he honored and loved many of them, he attributed most of his "education," such as it was, to certain incidental molding influences and to "contact with the other fellows." Text-books and schoolroom drill are only one factor in education.

In a paper read before the National Superintendents' Association, at its last annual meeting, Dean Briggs, of Harvard University, said that "while the football player gets a little culture from his studies, he gets his education from his football," and that "the whole drift of the present time is to turn work into play and play into work." His position was promptly challenged, and in the discussion which ensued the perils of football, mechanical drill and mental discipline were all vividly portrayed.

Without stopping to inquire exactly what is meant by "mental discipline," or whether Dean Briggs' critics differ from him as radically as they suppose, let us note some of the changes which the present "drift" has produced, and then consider the service of play in education. We have been rather strenuously engaged for twenty years or more in introducing the "new education," as it is inaccurately called. What has it brought us?

Much unprofitable discussion, no doubt; sometimes a search for a shortcut or a royal road, and sometimes a Quixotic battle with the whole existing order of things, but, on the whole, a

clearer purpose and a wiser plan in most of our educational work.

It has given us the kindergarten, that beautiful vestibule to education, in which the child's love of play and his active impulses are gently directed and utilized. It has carried the spirit of the kindergarten and some of its methods into the primary grades, making the schoolroom attractive and relieving school life of its old-time severity. It has simplified and extended the work of the middle grades, yielding opportunities and results which were unknown a few years ago. It has multiplied high schools, raised their grade, and greatly increased the number of their pupils; added normal schools and technical schools to our educational system, and disseminated the idea that men and women must be specifically trained and equipped for their future calling. It has developed the elective system in higher education, bringing hundreds of modern topics within reach of the student. It has sought out and applied the "natural method" in elementary education and developed it into the "scientific method" of the college and the university, encouraging the student to undertake investigations, gather facts, and reach conclusions which shall be, in a way, first hand. All this it has already accomplished; where conditions have been favorable, it has done much more, while there are few places in which more or less of these vitalizing movements have not penetrated.

Why has a "drift" which has brought such valuable results tended to turn work into play and play into work? Because we have been trying to learn the lessons which nature teaches and to apply them in our work. In the growth of the child, nothing is more remarkable than his ceaseless activity. Every wak-

ing moment is filled with action. His frequent mishaps and bruises cause little concern, but a premature sedateness is a matter of serious import. Should his noisy restlessness cease even for a short time his mother is filled with apprehension for his safety or his health. As he increases in strength and intelligence his inclination to play becomes more marked. Activity which before seemed aimless is now vigorously directed to a definite purpose. His impulse to play constantly asserts itself. If toys and companions and cheerful surroundings are lacking, the play instinct may be modified, but will not be suppressed. Indeed, that would be an unnatural child whose laughter and crying did not spring in rapid alternation and whose fickleness was not at once his mother's daily amusement and despair.

The purpose of nature in this insatiable love of play is obvious. It is to develop her children and prepare them for their life-work. The law of growth is use. Play is nature's mode of securing practice in necessary acts. No sense-organ, no muscle or nerve can be fully developed and made available for effective service without long-continued exercise. This is true of animals no less than of man. The kitten in its play seems to be bent only upon amusement, as when she pounces upon the straying ball or leaf, but she is really training herself to spring with unerring swiftness upon her future prey. Seton-Thompson has shown us, in his stories of the woods and the plain, that many wild animals would starve were they not trained in their native haunts, while still very young, for the predatory life which they are to lead. Their early education takes the form of play and is their daily delight. Their distinctive traits are carefully cultivated, and their progress is rapid. The keen senses, the cunning strategem, the noiseless pursuit, and the fierce encounter are all foretold in their play. The animal which can play best becomes the one which can hunt best and most surely escape when pursued. In the selection of nature, he will survive long after his less playful mates have perished.

Play indicates the growth of powers and capacities which require exercise for their complete unfolding. The muscles become firmer, the bones tougher, the lungs larger, and the heart stronger because of the love of play. Every function is improved, and the whole body is built up and strengthened.

No less valuable is the mental stimulus of play. The child is trained by it to quick perception, rapid judgment, prompt decision. His imagination cunningly suggests a thousand things to be done, and then trains the will and every power of body and mind in the effort to do them. The sports of childhood are admirably adapted to quicken the senses and sharpen the wits. A simple little game, like tag or hide-and-seek, calls many faculties into exercise and keeps them alert. Ready control is obtained both of body and of mind. Nature has effective ways in her school of securing the exercise which is needed to develop every mental and every bodily power. She fills the activity brim-full of enjoyment and then gives her children freedom, assured that they will be their own best teachers.

Prof. A. H. Yoder has made a minute study of the boyhood of fifty eminent men of modern times—most of them men of the nineteenth century. It is related that every one of them was fond of play, active in it, in his boyhood. Many of them were leaders in outdoor sports. Not one of them carries out the idea, formerly so prevalent, that great men were sickly or physically inactive in youth.

Many have preferred some system of gymnastic drill to play. These drills have the advantage of securing for every member of a class a certain amount of physical exercise, and they do not require large playgrounds or athletic fields; but they lack the spontaneity and mental stimulus of play. Professor Mahaffy says that "the schoolboy who is trained in cricket, football, and rowing enjoys a physical training which no gymnastics, no classical training of Greece or Rome ever equaled." It is not so much form as freedom of action which is needed. Dr. Weise, commissioned by the German Government to study the organization

of the English public schools, commended this freedom and the exhilaration of the English games in contrast with the German gymnastics. He said in his report that the young men of Eton and Rugby did not play in order to develop their muscles, expand their lungs, quicken their circulation, improve their figures, or add grace to their bearing. They thought of none of these things. They simply played from the love of playing, and all these and many other benefits were the result.

It has been said that it is work which transforms a boy into a man, but it is also to be said that the boy of promise plays. His love of fun is his choicest gift, for he thus secures the health and vitality which are to be his working capital. Play lays the foundation of strength—strength of body, strength of mind—and then it trains the directive power which is to use it. While it springs from an instinct, an irresistible impulse, it contributes to the highest rational ends. It quickens the perceptive processes, brightens the imagination, trains the judgment. What can be more charming than the youthful flashes of wit and wisdom which it elicits? The habits of thought induced in childhood by the happy hours of play are some of the most precious things in education. Few traits can be more desirable than mental vivacity and responsiveness, than ready appreciation and a disposition to be easily pleased, than joy in wholesome companionship, than an instinctive condemnation of whatever is untrue or unfair. Nature intends that this early impulse shall so stimulate the sensibilities and lighter emotions as to infuse gladness and sparkle into the activities of the mind as long as one lives. "It is a crime against a child," says Dickens, "to rob it of its childhood." His books contributed largely to the emancipation of childhood from cruel hardship, and the schools have been quite transformed since he wrote; but there is still too much repression in education. If the child is denied his rightful sports, if premature quiet and sedateness are enforced, he will lose the buoyancy and cheerfulness which should be his intellectual and moral tonic all his days.

Much ingenuity has been shown in the invention of schoolroom games. Some of them possess all the interest of outdoor play. They may be the best that can be done in many of the old city schools; but, in future, let us locate our schools where reasonable playgrounds can be provided, and let us give plenty of time for recess. "Man made the school; God made the playground," says Walter Bagehot. Why should we mar the divine plan in our efforts to educate the child?

Nowhere is the beneficent service of play more apparent than in the training of the will. No element of character is more fundamental than will-power. It is this regal faculty which gives efficiency to all the rest. Man is strong or weak, upright or corrupt, according to the attitude and strength of his will. Whatever augments the will, if rightly directed, enriches every other power. Like other functions, it is trained and developed by exercise.

It is interesting to note how admirably the sports of childhood are adapted to train and strengthen this power. In the school of nature ample provision is made for its cultivation. How instinctively do schoolboys turn to wrestling and racing. Games of strength or skill appeal to each contestant to put forth his utmost efforts. Again and again the test recurs, and each time the will marshals all its forces to attain the end desired. The youth who evinces greatest force of will becomes the leading spirit of his group of playmates or the captain of his athletic team. Thus, the man learns in his youth to meet competitors, to surmount obstacles, to face an opponent, to unite his efforts with those of others. In such ways as these, every successful man must learn early in life the joy of achievement. Napoleon said that he made his generals out of mud. He gave them something to do and then inspired them with a determination to do it. When the Duke of Wellington, late in life, sat watching a game of football among the students of Eton College, he said, "There's where the battle of Waterloo was won."

Play is a preparation for work. It soon ceases to satisfy unless it involves an end to be attained—unless, in a way,

it becomes work; and it is no less true that work, in order to be at its best, must have in it some of the charm of play. It is not easy to sharply distinguish play from work. Rigid definitions fail. The boy soon outgrows the sports of childhood. The games which yesterday absorbed all his energy and filled him with delight find him listless to-day. They are to him like twice-told tales; his mind refuses to be interested, and soon feels a positive revulsion against them. Hence, the games of childhood follow one another in rapid succession, so that a few years' difference in age forms a serious barrier to the association in play of the children of the same school or even of the same family.

No one cares for play which is too easy. Tricks and puzzles lose their interest when we know how to do them. Football and chess rank high among games because they are difficult, but sports and pastimes which require no effort become intolerably dull. Mere muscular exercise affords little enjoyment. Set your boy to run alone up and down a field, and how quickly will he tire; but give him companions and a ball, and he will play for hours with keenest delight. Among adults, play is a means of rest and recreation, not so much because it involves physical exercise as because it absorbs one's energies and turns them into a new channel. Every worker should have his avocation as well as his vocation—a congenial way of employing his leisure hours. It should be active and diverting; loafing is not play. In certain conditions of depleted health, the equilibrium is restored and full vigor secured, not by mechanical exercise, much less by idleness, but by a fresh interest. And so the skillful physician, instead of prescribing Indian clubs or a daily walk before breakfast for such a patient, ascertains his habits and the bent of his thoughts, and tries to get him absorbingly interested in some pursuit which involves appropriate exercise. He sends him on a fishing or hunting excursion, encourages him to cultivate flowers, to travel, to engage in athletic exercise,—anything to really interest him and at the same time afford proper physical conditions.

Work, in order to be at its best, must have in it some of the enthusiasm of play. It must not be drudgery. The laborer who toils merely for his wages will never find real pleasure in his work. It may be a satisfaction to him to feel that he is earning a livelihood, but he must become interested, stimulated, by the hope of promotion or the desire to excel before he can feel true enjoyment in it. When this higher motive enters into it his powers of accomplishment will be vastly increased. Give him an interest in the business, a share in its profits, some voice in its management, and he is transformed. Work then becomes to him an enthusiasm, a kind of game in which he has a part. He is playing for success; important results depend upon his energy and skill. The enterprising business man, like the football-player, is alert, full of vigor, and intent upon the next move. The difference between them is not very radical.

Considerable effort is made to infuse into school work an element of play. Primary teachers have complained that this is done to such an extent in the kindergarten that the children expect, when they enter the first grade, that their teachers will do all the work and let them do nothing but play. But these teachers are learning how to utilize the interest and receptivity which the kindergarten has created and to build upon the foundation which it has laid. Better than this, they have learned to carry the spirit of the kindergarten into the work of the grades and proved its value in many ways. The dreary, monotonous drill, which was once so much extolled, has given place to enlivening exercise and joyful acquisition. The shrill-voiced wielder of the birch whose pupils shouted in concert their answers to set questions has found other and, let us hope, more congenial occupation. Does the kindergarten "lack system?" Do the children ask too many questions? Let us be glad. Why should not the restless, inquisitive instincts of the child be captured in their first joyful unfolding and turned to account in his upbuilding? Countless phenomena in nature and life appeal to his curiosity. He needs to know about them. He will never again

be able to acquire and assimilate the knowledge so easily. Teach him the things which he can learn; do not arrest his development and make him hate school by trying to "drill" into him a knowledge of laws and processes which he cannot comprehend. Lack of appropriate intellectual food is often the lot of deaf children. Deprived of the principal means of communication with their fellows, they have but little to interest them. Consequently, as Andral says, the deaf mute "remains habitually in a state of half childishness; not because he is constitutionally inferior to other men, but because his powers are not developed by intercourse."

A few years ago an instructive experiment was tried in certain schools in the city of Paris. Four carefully selected teachers were each assigned to the duty of teaching a class from the time the pupils entered school until they completed a seven years' course of study. There was to be no crowding, no marking time. The pupils were not selected, and the conditions were as usual, except the ability of the teachers. Each class completed the work in less than four years—a suggestion of the possibilities which await our schools as their teachers become more skillful and enthusiastic.

In the best schools, increased attention is everywhere given to the pupil's interest. More effort is made than formerly to secure it. As he becomes more mature, his ambition is appealed to and ideals of superiority and high attainment are held before him. His real preferences and aptitudes are sought out and encouraged; great freedom is given him in the selection of his studies and in many details of his work. In the college, and even in the high school, he is invited to undertake original problems and investigations, and to work out for himself in the library or the laboratory the solutions desired. It is true that he might sometimes learn the required facts more quickly by consulting a text-book or listening to a lecture. But this would tend to make him weak and a copyist; what is desired is that he should become strong and self-reliant. "If truth," says Lessing, "were a bird which I held

in my hand, I would let it fly away, that I might have the pleasure and the benefit of catching it again." Education involves earnest action; it is not acquired without effort. The classical and literary studies, scarcely less than the sciences, have felt the vitalizing touch of the new movement.

It has been said that "nature determines the mental caliber and education merely smooths the bore and makes the aim precise." This a fundamental error, but too much of our teaching has been based upon it. Training in forms, in expression, has its place; it need not be undervalued. But the great purpose in true education is the development of power. Culture is fine, crudeness is a hindrance, but culture and crudeness are alike insignificant when there is no power behind them. The great need is strength. There are processes which are carried on in the name of education that diminish rather than increase mental force, that make dilettantes and triflers rather than earnest men and women. There are aims and ideals which enfeeble the moral stamina and the intellectual grip, which take spring and earnestness out of both work and play, leaving young men incapable of great exertion and paralyzed by the belief that genuine enthusiasm is in bad form. An eminent professor in one of our leading universities attributes the repeated failure of his institution in intercollegiate debate to a lack of moral earnestness among its students.

The best type of business or professional man is one who is able to focus his energies and bring them to bear upon a definite subject, to hold them steadily to the matter in hand with a grip which is quiet and easy, but firm. He may or he may not be familiar with the methods of investigation pursued in modern science, but he unconsciously follows them in the search for truth and the detection of error. He is intensely in earnest, and is able to say, with Lord Chancellor Coke, *Labor ipse voluptas*. Such men find exhilaration in their work, a keen delight in maturing their plans, in overcoming the obstacles which they encounter.

What is required in our school work is that which is needed for successful work in everyday life—vitality, spontaneity, zest. It is more important in

the school than in the office, because the ulterior aims and motives of real life are largely wanting in the school.—*Review of Reviews*.

THE SLEEP OF CHILDREN.

Sufficiently long and undisturbed sleep is just as important a factor for the favorable development of a child as proper and sufficient nourishment, sunlight, fresh air, cleanliness, and exercise. We know that sleep is merely a phenomenon caused by fatigue and indicates that the organism needs rest for recuperating its spent energy. The fatigue may be of the muscles or of the nerve center and its branches. Fatigue of the muscles does not necessarily require sleep for a remedy. In most cases mere physical rest is sufficient to cure muscular fatigue, while fatigue of the sensorium or brain center can be relieved only by sleep.

Healthy infants sleep a great deal during the first year of their life. The infant's functions are almost purely vegetative and confined to alimentation and digestion. What the baby needs is ample food at proper intervals and all the sleep it wants between meals. One would suppose that infants, having practically no muscular and brain work to perform, would not require much sleep. That is a great mistake, however. The muscles employed in sucking and swallowing, in the movement of the digestive and respiratory organs and of the heart are at work nearly all the time and produce a state of muscular fatigue. The nerves of the sensory organs are constantly irritated by continuously changing impressions of light, sound, touch, smell, and taste, and, although the impressions transmitted to the brain do not produce there conscious impressions, they are sufficient to produce fatigue of the sensorium and a demand for sleep.

As a rule the causes disturbing the sleep of infants are of a more or less harmless nature. Usually there is some slight trouble with the digestion—constipation, flatulency, colic, or diarrhoea,

and, last but not least, mere hunger or thirst—that causes the disturbance. Other causes are flies, fleas, bedbugs, and other insects, slight irritations of the skin, pain caused by local pressure, too strong light, and noises of all kinds. Even the dim light of a night lamp may disturb the sleep of a particularly nervous and impressionable child.

Parents should make every effort to determine which disturbs the sleep of their child and remove that disturbing cause. In no case should they resort to rocking or similar methods of inducing sleep. The room in which the infant sleeps, as well as the bed or crib, should be scrupulously clean, the air should be cool and pure, strong light and all irritating noises should be avoided, the covers should not be heavy enough to produce perspiration, and the child should not be hungry when it is put to sleep. Parents should also avoid anything that would be liable to excite the child immediately before it is put to bed. A quieting lullaby, sung with a low voice and in a monotonous manner, is one of the best means for producing a quiet slumber.

The tender and impressionable brain of children should not be overtaxed by overwhelming it with impressions of the senses and by any attempt to cram it full of positive information or exciting fiction. Many bright children are thus overexcited by their thoughtless parents, and the consequence is that the little ones do not sleep well. Frequently such children have frightening dreams, which cause them to cry out in their sleep and to throw themselves around in a restless manner. Between the second and the sixth years of their life, at the age of playfulness, great care should be taken not to subject the children to excessive

emotions. Psychological excitements, to which belong those produced by many blood and thunder fairy stories, are exceedingly harmful during that period, because the rapid development of the brain, which is supplied with a constantly increasing supply of blood, makes that organ extremely sensitive. Neurasthenia is frequently the result of improper training. All amusements which have a tendency to unduly excite the child should be avoided after supper, and only mere mechanical occupations should be permitted. In cases where spoiled children refuse to sleep unless they are permitted to indulge in certain bad habits, the parents should use severity, if necessary, to overcome the stubbornness of the children.

During the school age children require a large amount of undisturbed sleep to give their brain an opportunity to rest from the unaccustomed strain of learning and studying. At that time of their life children should have a sufficient amount of recreation and physical exercise in the open air, and they should not be permitted to devote the evenings to their studies. If children should have a desire to sleep during the day they should not be prevented from taking a nap of fifteen or thirty minutes in a darkened room. It will not interfere with their sleep at night. Under normal conditions children should sleep at least eight hours without interruption and awaken refreshed and in good spirits.—*Lay Editorial in The Chicago Tribune.*

THE PERSONALITY OF THE TEACHER.

Even in these days when so much is said about pedagogical insight and scientific pedagogy, it is encouraging to note an increasing recognition of the truth that the personality of the teacher is after all the most potent influence in shaping the ideals of the young. A teacher with a rich and fine personality brings to his pupils an uplift that can come in no other way. While it is strictly true to say that teaching is primarily dealing with mental processes and mental growth, it is also to be said that teaching is a spiritual process, a mysterious process by which one nature influences another. What some writer calls the buoyancy of right living gives a vitality and fullness of life to the teacher that no amount of pedagogical knowledge can bring unless it is found in union with a harmonious and well-ordered life. Education is in the best sense an inner life, an intangible but pervasive form of life that gives power and value to the outward acts of man. In the work of education we sometimes forget that the outward expressions of a man's life are the result of the promptings of the inner spirit, and that the test of an education is to be sought in the

quality of life it produces. If school committees and superintendents had a more vivid realization of Emerson's declaration that it makes very little difference what you study, but that it is in the highest degree important with whom you study, our schoolrooms would exert a more powerful influence on their pupils in shaping their ideals of thought and conduct. The fruitful contact of child-nature with a teacher who breathes the atmosphere of moral earnestness and high purpose is above all valuation as an element in raising the tone and type of human life. Results of this kind are not tested by examination-per cents, but are to be looked for in richer and nobler lives. "There flows from the living teacher," says Mr. Mabie, "a power which no text-book can compass or contain. Text-books supply method, information, and discipline; teachers impart the breath of life by giving us inspiration and impulse." It is the supreme purpose of the school to furnish conditions for preparing boys and girls to get the best out of life, and first in securing right conditions is a teacher whose nature is responsive to the highest and best things

in life, and who has thought earnestly upon life's problems and upon the ways and means of solving these problems. Responsiveness to the things that are

vital and pure and noble in human life must ever remain an essential element of the equipment of true teacher.—*Editorial in the Journal of Pedagogy.*

THE MORAL ELEMENT.

The editor of the *Westminster* makes some pertinent remarks in a recent number of his periodical, regarding the teaching of morals that, already quoted in the *Canadian Teacher*, are worth passing along. If, he suggests, the great aim of education is not to impart intellectual culture, but to develop character, then it cannot possibly be secured by ignoring the child's moral nature and leaving his moral training out of view in the provision made for his education.

It is pre-supposed, of course, that each teacher is capable of discharging this difficult and delicate duty if he were allowed a fair opportunity, though it must be admitted that in the teacher's training this is very inadequately attended to, and that in engaging teachers it is practically ignored. A very common practice with trustees, as the columns of the daily papers at certain seasons abundantly testify, is to advertise for a teacher holding a certain grade of certificate and ask the applicant to state the salary expected. Seldom is a personal application, as it should always be, insisted upon. The applicant may be physically defective, which is bad enough, but may also be redolent of vulgarity and may show manifest traces of habitual immorality, which is far worse. The same trustees who choose a teacher in this slipshod fashion would not think for a moment of selecting a horse in the same careless way. If told that every animal of a certain assortment had been carefully trained, tested, and certified to, they would still insist on a close personal inspection for the purpose of satisfying themselves as to the fitness of each individual. If they admit their own incapacity to exercise like cautious intelligence in the choice of a teacher they should retire from the position, the du-

ties of which they are obviously unable to discharge.

The usual answer to appeals on behalf of the child's moral nature is that there is no time in school for systematic moral training, and that his and the teacher's time is so taken up with so-called intellectual culture as to leave none for the other and greater purpose. This reply is absurd on the face of it. If one part of a child's education is as important as another, it should receive as much attention, and there should be devoted to it a fair share of what time there is. Moreover, the methods of intellectual training are too often an obstacle instead of a help to moral discipline. Especially is this true of the work of preparing candidates for examination, which now fills so large a place in the eyes of the public, the teacher, and the pupil. To substitute the ignoble motive of success in such an ordeal for the nobler one of working from a high sense of duty, is to impose an insuperable obstacle to effective moral discipline, and it makes the case immeasurably worse when the teacher is constantly suggesting to the pupil by his practice that the value of subjects and of exercises is to be appraised solely by their utility in preparing for a test that overshadows the school like an incubus. The rush and the cram in preparing for scholastic examinations are in the majority of cases a positive barrier to moral evolution.

What is wanted to secure the best practical moral training for the pupils in our public schools is a wider view of education and a just appreciation of the importance of moral element in it; more care in the preparation and selection of teachers; more freedom from the storm and stress of factitious examinations;

more leisure for the teacher and pupil to do their work thoroughly and enjoyably; more æsthetic surroundings in the shape of better kept buildings and grounds, and, above all, a more rational standard by which to test the teacher's work than the mere counting of successful candidates in some rule-of-thumb or-

deal that may let through candidates poorly prepared for life and hold up those who have had an ideal training with admirable results. Ability to pass a written examination has no necessary connection with moral or even intellectual culture.—*The School Journal*.

THE EDUCATION THAT COUNTS.

It is plain that many of the surplus millions of the United States are going to the colleges and universities. Education will become cheaper and more possible to the poorest boy every year. Mr. Morgan's million dollars to Harvard, the bi-centennial fund of two million dollars to Yale, and other sums aggregating millions more to many of the six hundred and odd colleges and universities of the United States, not to mention the rumor of a fifty million dollar fund for the University of Chicago, all mean that the deserving institutions of the country are going to get as much money as they can reasonably expect. Even now it is possible for the poor boy to get through a university without asking aid from his parents, and if he develops good ability and much capacity he will find helping hands all along his pathway to a higher education.

In the midst of the offering of these opportunities comes a warning voice from men of more practical ideas, who hold that too much time spent in post-graduate work is a handicap on success in the world. We may not accept their dicta entirely, but there is wisdom in listening to what they have to say. A man naturally inclined to be a student often gets to love knowledge simply for the sake of learning. He accumulates a vast amount of information without developing practical ability to apply it to a world which looks for results. Such a one may live and study all his life, and when he dies the world has lost little. It makes no difference how much education may

be developed. Its value must be measured by its usefulness in one form or another.

The sensible student, therefore, never gets so deep in his books that he loses sight of the world. The university is different from the manual training school, but in final results the aim must be the same or it miscarries, and that aim is to fit men and women for better and higher work in the world.

It is gratifying to see that modern education is not rushing to overdevelopment in mere study. There are some who fall victims to the quiet of the classroom, or who find their greatest happiness in the corner of a library where they may never be disturbed, but the great majority while at their books hear the call of the world and see its duties in everything that they study.

This is the kind of education that the rich men want to increase by the encouragement of their generous millions. They themselves belong to the active bustling world of trade and commerce. They know that the growth of business and the better management of affairs in public as well as in private life depend upon having educated men in the practical work of the world. The gifts thus become investments that will return dividends upon their own estates, for as the quality of service improves, so does the value of all belongings increase.

Business has changed. No longer does the merchant who merely knows his own corner of the square, and the few things that happen in front of his store, make a

great fortune or control the destinies of the times. He must know what is going on in the world. He must also be able to estimate the relative values and influences of events. He must use the knowledge and wisdom of the past as guides for the present, and a trained foresight for the difficulties and opportunities of the future.

Then, too, there is a wider horizon in public life. With steam and electricity the world has grown very small. Its peoples have been brought closer together, and their histories, their characteristics, their prejudices and their needs make up a necessary part of the public man's ed-

ucation. The real statesman no longer represents a district or a State. He must look even beyond his own shores. In the sciences and in the professions this broadening has no limitations. Everywhere, in all departments of effort, there is a freer and a greater opportunity, and the final verdict is not based on what a man knows or what he has studied; not on what he has hoarded either in mind or in treasury, but on what he does that contributes to the good of mankind, and which exercises an influence in the upward advancement of the human race.—*Editorial in Philadelphia Saturday Post.*

ARITHMETIC.

ROBERT J. ALEY,

State University, Bloomington, Ind.

The study of arithmetic should give clearness, activity, intensity and tenacity to the mind on the disciplinary side; the drill or practical side should train to easy, quick and accurate computation.

Perception, attention, memory, imagination, judgment and reason are quickened and strengthened when the learner has grasped most firmly the fundamental principles of arithmetic and he can apply them with just discrimination to the solution of problems. The science of numbers requires the child to deal with things, relations, words and thoughts. By close attention to these he becomes patient, logical and systematic—habits of great value in the ordinary affairs of life. Self-mastery of principles is the only sure way to a clear understanding of this subject. Truth is many-sided. Some catch a glimpse from this side, others from that side, and so on. It is the living teacher whose presence, inspiration, directing power can awaken thought and stimulate a class to its best and highest efforts. Without soul force, energy and enthusiasm, a love for truth and an overweening desire to search for it, to find it and retain it, all education is naught.

While all true education in that higher sense is the generalization of mental power and noble character, the science of arithmetic is peculiarly adapted to developing continuous and related thought—in placing before the mind certain definite conditions, from which must be deduced necessitated conclusions.

The child begins numbers concretely at first, but even then memory and imagination run far ahead of "sense products." To keep the child too long with "the sensuous and the known" is mental death.

Right instruction in arithmetic requires that training which enables the learner to seize quickly the conditions of a question, and to hold them clearly and firmly, and to examine them attentively till he sees the conclusion.

The advantages arising from a certain mechanical skill in obtaining results, which is frequently referred to as business or commercial arithmetic, should be secured in connection with the principles of the science rationally apprehended. The shopkeeping idea of arithmetic so prevalent among certain classes, while it may satisfy the superficial, is unworthy the name of the science which it belittles.

To study is hard work. To concentrate, to direct, to prolong, to change effort, to think closely, effectively and successfully, distinguish the thinking man from the mere man. To solve problems is beneficial, but to solve problems and think equally as well on other questions is better still.

To become a good arithmetician is the ideal that should be placed before everyone who studies this science. The true teacher is the one who awakens and puts energy, enthusiasm, activity, direction and confidence into another mind and stimulates it to do its best. The very best work one can do always educates. Striv-

ing for something higher, nobler, grander, uplifts the soul and purifies the character.

The following are the essential conditions for teaching arithmetic:

1. A live, well-qualified teacher, who understands child mind and knows how to teach one thing at a time and how to teach that well.

2. A child that can be taught how to sit or stand, how to study, how to think, how to reason, and how to tell or write what he knows.

3. Books, slates and pencils, blackboards, crayons and erasers.—*The Educator-Journal*.

SOME TEXTS FROM HINSDALE'S "ART OF STUDY."

C. W. MICKENS,

Moorhead, Minn.

"One of the most valuable arts that a boy or a girl, a young man or a young woman can learn is the art of study."—*Art of Study*, p. 7.

The above words introduce that admirable pedagogical study of Prof. B. A. Hinsdale, "The Art of Study."

How significant and suggestive are the words just quoted. They are of the highest importance to the one who would aspire to become in any degree learned. How apropos of the times, inasmuch as too few of the present age, in the rush of business and the urgent demands of the hour, take time to acquire the art. To know and to practice the art involve the most careful attention and the deepest concentration. Economy of time, rigid mental and physical habits, and the most ardent perseverance are necessary to its full realization.

Success in life depends upon a mastery of the art of study. Not only as related to books, but as related to every pursuit of life. There is no substitute for it. Even genius is largely the result of it.

Consciously or unconsciously all great men have learned the art of study. Newton, Bacon, Milton, Gladstone and scores

of other great minds could have borne testimony to its value. They were masters of its vital principles—attention and concentration.

These words appeal to the teacher and to the pupil alike. Teachers should first acquire facility in its use and then use their skill in teaching pupils how to acquire and apply it to self culture and education.

"A pupil will learn to study by studying and not otherwise, just as he will learn to swim by swimming and not otherwise."—*Ibid*, p. 23.

The author recognizes in these words the all-important maxim of education, "We learn to do by doing." It is not so much, after all, what others do for us, but what we do for ourselves that is of most worth. The modern spirit of education is in full accord with the doctrine of the text. The idea has forced itself upon our curricula, and we find language work supplanting technical grammar in the earlier grades. Practical work in measuring, weighing and handling has superseded the theoretical work of a few years ago. Sloyd and manual training are finding their way into modernized

courses of study in accordance with the same principle.

The present age demands hand training as well as mind culture, and emphasizes the fact that we can learn best by doing. So the author makes application of the principle to the art of study. He thus impresses all with the importance of self-activity in the acquisition of the art.

"In the schoolroom, misdirected and wasted effort is one of the commonest facts."—*Ibid*, p. 33.

Every schoolroom bears testimony to this truth. Apparently dull pupils and worried teachers are direct consequences of it. It arises from the lack of power to correlate and coordinate one's forces upon

the work of the hour. It is owing, in many cases, to an ill-defined purpose to be accomplished. And much of it can be traced to ignorance of the true art of study.

Of late, attempts have been made to correct the evil. Correlation of studies has proved efficacious. The natural and logical sequence of study has been introduced, and many things have been attempted to properly direct and conserve the effort of teaching and learning.

The teacher must, however, bear the burden of the responsibility. It is only when she has mastered her own powers that she shall be able to direct and conserve the efforts and energies of her pupils.—*Michigan School Moderator*.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

ENGLISH WORDS.

This little work is a text-book for schools, prepared by Dr. Edwin Watts Chubb, Professor of English in the Ohio University. Some of the chapters are, "A Short History of the English Language," "The Sources of our Words," "Christian Names and Surnames," and "Selections for the Study of Words." A very valuable chapter contains an alphabetical list of Latin and Greek roots with many of their derivatives. The aim of the author in preparing this useful work has been "to be interesting rather than original, clear rather than erudite." (75 cents. C. W. Bardeen, Syracuse, N. Y.)

GRADED WORK IN ARITHMETIC—SEVENTH YEAR.

Principal S. W. Baird, Wilkesbarre, Pa., is the author of this work, which is the latest addition to the series, which will contain eight volumes for the first eight years in arithmetic. This volume begins with a thorough review of the work of the preceding years, accompanied by applications to more difficult problems, exemplifying the principles already developed. The new subjects introduced in this book are duties or customs, commercial forms, bank discount, exchange, and simple and compound proportion. As in the preceding books, the treatment is largely introductory and progressive. (25 cents. American Book Company, New York and Chicago.)

LESSONS IN PHYSICAL GEOGRAPHY.

In no branch of school study has greater progress been made in recent years than in geography, both in methods of teaching and in its text-books. This notable progress in physiographic knowledge and teaching is very strikingly illustrated in this new text book on physical geography by Professor Dryer. Although especially adapted for the high school course, the treatment is easily within the comprehension of pupils in the upper grades of the grammar school and may be used to great advantage in connection with the advanced school geography. Throughout the book Professor Charles R. Dryer, the author, has introduced many realistic exercises which appeal to the actual or

possible experience of the student. They are designed not for the purpose of discovery but of *realization*, and progressive teachers will appreciate their teaching force and application in both field and laboratory work. Discussions of topics which have a special bearing upon human interest are introduced at intervals throughout the book, and the relations of the physical features of the earth to human progress are systematically treated in a final chapter. An unusually large number of illustrations, maps and diagrams are used, and these have all been selected with reference to their teaching value. Appendixes give full directions as to where good material and appliances for teaching may be obtained and describes the best methods of using them. A list of nearly all the geographical literature available is added for the use of students, teachers and others wishing to provide a good working laboratory on the subject. (\$1.20. American Book Company, New York and Chicago.)

STORIES FROM ENGLISH HISTORY.

These stories cover the period from B. C. 55 to A. D. 1901. Dr. Henry P. Warren, the editor, in preparing this work has endeavored to interest boys and girls in English history by stories of some of its great events and of some of the great men who adorn its pages. This aim being kept steadily in view throughout, it seemed right to select certain important incidents and characters and to deal with them in some detail and in as interesting a way as possible, rather than to load the pages with a multitude of names and dates, in the vain effort to crowd into a few pages a continuous history which would be at once full and interesting. However, no important events or personages have been entirely neglected. The illustrations are excellent and derived from great historical paintings and old prints. (\$1.00. D. C. Heath & Co., Boston.)

OLD WORLD WONDER STORIES.

This edition of Wonder stories is edited by Professor M. V. O'Shea, who says in his introduction: "These stories should find a place in children's literature. They have always in the past, and will continue in the future, to appeal in the strongest manner to the interests

of the young, and they will meet a need which cannot readily be supplied by anything in their stead." The stories included in this volume are "Whittington and his Cat," "Jack the Giant Killer," "Tom Thumb" and "Jack and the Bean-Stalk." (30 cents. D. C. Heath & Co., Boston.)

THE FOUNDATIONS OF EDUCATION.

The editor of this work is Dr. Levi Seeley, Professor of the Science and Art of Education in the State Normal School of New Jersey. In preparing this book it was not the purpose of the author to point out errors so much as to indicate positive factors which should be incorporated into our training and comprise a more intimate part of our practice, in directing childhood, both at school and at home. Of the many agencies that enter into the education of a child the author alludes to two, the teacher and the parent. We believe that both teachers and parents will find this book not only helpful but also interesting. (\$1.00. Hinds & Noble, New York.)

THE FOUNDATIONS OF THE REPUBLIC.

This work is unique in its field. While it does not primarily present historical romance, yet the personal and picturesque elements of the stories will prove fully as attractive to pupils as a romance and will supplement the regular instruction in history in an effective manner. Every statement is historically accurate and the illustrations are correct even to the smallest detail. This series furnishes precisely the sort of reading that has been so much needed in the schools. The dry-as-dust style which usually characterizes children's histories is replaced by life, personality, vigor and enthusiasm which is an inspiration and delight. This book is Volume V of a series entitled "America's Story for America's Children." (40 cents. D. C. Heath & Co., Boston.)

THE TALES OF MOTHER GOOSE.

The eight stories contained in this volume are first found in print in a French magazine which was published in 1696-1697. By some it is believed that these stories were not originally written by M. Perrault, but by his son, a lad of ten or eleven years, to whom the father told the stories as he had gathered them from the folk-tales of the oldest literature. "The son had an excellent memory, much natural wit, and a great gift of expression. He loved the stories his father told him and thoroughly enjoyed the task his father set him of rewriting them from memory, as an exercise." This edition is a new translation by Charles Welsh, and has the endorsement of Professor M. V. O'Shea, of University of

Wisconsin, who says: "A modest, faithful child will be strengthened in his good qualities; while one lacking them will have them aroused, to some extent at any rate, by following Cinderella in her career" in the story. "Cinderella, or the Little Glass Slippers." (30 cents. D. C. Heath & Co., Boston.)

UNE SEMAINE A PARIS.

This series of helpful conversations will make the visitor to Paris acquainted both with the physical features of the city and with the information and phrases necessary to get about independently. In addition it affords to the student valuable drill in modern idiomatic French. The conversations, which deal with the sights of the city, and the necessary orders in hotels, restaurants, stores, etc., were in each case written on the spot of the scene described, and are true to the life and features of modern Paris. The book is supplied with a French-English vocabulary and contains a sketch map of the city, as well as numerous illustrations of its principal objects of interest. It is a far cry from the old Ollendorffian "Have you seen the green shoes of the gardener's daughter?" to a modern and attractive phrase-book such as this, and we hope it may meet with well merited success. (50 cents. American Book Company, New York and Chicago.)

WAGNER OPERA STORIES.

Miss Elizabeth Harrison, of Chicago, says of this work: "I know of no finer illustration of how to handle the great myth treasures of the race than that shown by Miss Barber in the simple retelling of some of the old legends, told and retold by generations of mothers to their listening children, and which finally culminated by setting the soul of Richard Wagner on fire. They have interpreted the meaning of music to the childish heart as I have seldom seen it interpreted. What is too complex is left out. What was sweet and true and strong has been retained, and all has been rewoven with a daintiness of touch that belongs to the true artist, which in this case is but another name for the true story teller." This interesting book by Grace Elson Barber is illustrated by seven full-page pictures that greatly enhance the strength of the stories. (50 cents. Public-School Publishing Company, Bloomington, Ill.)

WHITE'S ART OF TEACHING.

In this volume Dr. Emerson E. White presents fundamental and guiding principles in a clear and helpful manner, and then applies these principles in methods of teaching that are generic and comprehensive, all methods being presented in the clear light of the best and

fullest experience. In the study of special methods great pains have been taken to show their true function and to point out their limitations; and this with a view of guarding teachers against the too common error of accepting them as general methods and making them hobbies. No other work we have seen discusses the numerous problems connected with teaching as an art with more lucidity and helpfulness. It throws a clear light not only on fundamental methods and processes, but also on oral instruction, book study, class instruction and management, written examinations, the promotion of pupils, and other problems of great importance in school work. The closing

chapters on the teaching of reading, language, arithmetic, geography, and other elementary branches, will be welcomed by many teachers who have been misled by the specious claims of methods which have only a limited space and utility in teaching. In these chapters the intelligent teacher will recognize the mind and teaching of a master whose observations and study of the field of American pedagogy have been wide, critical and comprehensive. We believe that the book as a whole will exert a most wholesome and helpful influence on elementary instruction. (\$1.00. American Book Company, New York and Chicago.)

Educational Articles in the January Magazines.

"The Educational Value of Play," John E. Bradley.....	<i>American Review of Reviews</i>
"Recent Progress in Astronomy," T. J. J. See.....	<i>Atlantic Monthly</i>
"England's Novelists in the National Portrait Gallery," G. K. Chesterton ..	<i>The Bookman</i>
"Huxley as a Literary Man," James E. Routh, Jr.....	<i>The Century</i>
"The American Diplomatic Service," Waldron Fawcett.....	<i>The Criterion</i>
"One Century of Actors and Acting," Charles H. Meltzer.....	<i>The Critic</i>
"Dickens and His Illustrators," B. W. Matz.....	<i>The Cosmopolitan</i>
"Free School Books," Elisha B. Andrews.....	<i>The Cosmopolitan</i>
"The Future of the English-Speaking World," W. T. Stead.....	<i>The Forum</i>
"The Military Duty of the Engineering Institutions," Rear Admiral George W. Melville.....	<i>The Forum</i>
"The Place of Geography in the Elementary Schools," Hon. W. T. Harris.....	<i>The Forum</i>
"Reciprocity with Canada," Hon. John Charlton, M. P.	<i>The Forum</i>
"The Education of a Child," George Howard Griggs	<i>Ladies' Home Journal</i>
"The Child of Three and Over," Elizabeth R. Scovil	<i>Ladies' Home Journal</i>
"English Statesmen and Rulers," George W. Smalley.....	<i>McClure's Magazine</i>
"William McKinley as I Knew Him," Senator Marcus A. Hanna.....	<i>National Magazine</i>
"America's Inferior Place in the Scientific World," Carl Snyder.....	<i>The North American Review</i>
"Athletics at the United States Military Academy," Captain R. P. Davis, U. S. A. ..	<i>Outing</i>
"The American Commercial Invasion of Europe," Frank A. Vanderlip.....	<i>Scribner's Magazine</i>
"The Bureau of American Republics," W. Woodville Rockhill.....	<i>The World's Work</i>

BIRDS

The first 18 numbers of "Birds and Nature" were devoted to birds and each of the first 12 contain 10 plates, the other 6 contain 8 each. Price of these is 15 cents each. We have reprinted 10 editions of 5000 each of some of these numbers. These early issues always justify themselves and we earnestly urge recent subscribers to order back numbers. See list of color plates on another page.

The 54 back numbers of BIRDS AND NATURE, \$7.50, sent for \$5.00, make it \$6.00 and we will send the magazine for 1902.

Does This Offer Take? Somewhat!

I enclose check for \$10.00, for which you will please send two sets of BIRDS AND NATURE, unbound, to my address.

Cleveland, O., Dec. 20, 1901.

J. H. LAMB.

I enclose P. O. Money Order, for which please send the 54 back numbers of BIRDS AND NATURE, and other goods for Christmas, as follows:

Jacksonville, Ill., Dec. 20, 1901.

STERLING SHAW.

Enclose \$5.00, for which please send the complete set of unbound magazines for five years.

P. BROBERG.

New London, Minn., Dec. 17, 1901.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Of Birds of Lakeside and Prairie, \$1.00

"Real natural history is served up in Edward B. Clark's 'Birds of Lakeside and Prairie' (Chicago and New York: A. W. Mumford), with sixteen full-page illustrations in color. Mr. Clark has much to tell in a plain and familiar way of his observations of birds in Chicago, among hills and prairies, often with the camera. He is a wholesome companion for any boy or girl. The same author and publisher send us 'Bird Jingles,' a thin quarto with larger and more effective colored plates (likewise from stuffed specimens,) and with rhyming characterizations correct in metre and of a pleasant humor."—From *The Nation*, Dec. 26, 1901.

Of A B C Book of Birds, \$1.00

"Mary Catherine Judd's 'A-B-C Book of Birds' (A. W. Mumford). Each plate is attended by an account of the bird, even to its scientific name, and by what the author calls 'nonsense rhymes for little ones;' but they are very sensible, and much above the average of verse for children—witness the witty line (of the Ibis:) 'That bill, it is so very long your shortest note must be a song.' The curious may compare Mr. Clark's lines on the whippoorwill with Mrs. Judd's. We heartily commend her book for holiday time and all times."—From *The Nation*, Dec. 26, 1901.

Of the Review of Education, \$1.00

"This excellent magazine, published monthly by A. W. Mumford, Michigan Avenue, Chicago, at \$1.00 a year, is one of the best educational monthlies we have ever seen. It is not one of the common sort—such papers are headed by an all wise (?) editor who is bound to fill the editorial page and all other vacant space with his own thoughts. This journal rather gives little of editor's chat, and that little is good. For the remainder of printed matter a few well known educational writers treat on timely subjects; and from pages of the principal journals of America, articles relating to education are reproduced."—Aiken, S. C. *Recorder*, Nov. 15, 1901.

Of Birds and Nature, \$1.50

"I have used your interesting and instructive magazine, *Birds and Nature*, since the first appearance and have found it most helpful. In my work lecturing for the American Humane Association I have found that in the schools where teachers used *Birds*, the children were delightfully acquainted with the birds. May your valuable magazine continue to teach teachers, pupils and parents beautiful lessons of humanity through making the acquaintance of the most interesting and helpful of our fellow-creatures—the birds."

R. J. O'HANLON.

Milwaukee, Wis., Dec. 9, 1901.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

THIS IS THE MOST GENEROUS OFFER EVER MADE BY AN EDUCATIONAL PAPER.

SCHOOL ROOM METHODS AND NATURE STUDY. Three Numbers. Each 25c.

Contents of Volume I. are given only in a general way. Those of 2 and 3 in detail. Each volume is profusely illustrated. Money refunded to anyone who is not satisfied.

CONTENTS OF NUMBER I.

Books helpful in Nature Study—Symposium on Nature Study—Pedagogic Aspects of Nature Study—Nature Study and the Teacher—The Outdoor Study of Geography—Plant Study—Seeds and Their Germination—The Study of Leaves—Flowers and Their Work.

The Study of Trees.

A Dozen Common Birds, Bird Study, Olive Thorne Miller.

Bird Day and Birds, John Burroughs; Our Common Insects—How to Study Their Life History and Habits (illustrations for this article and the one on Mammals furnished by Prof. Luger, most of them from his own drawings).—Selections from Literature to Accompany Nature Lesson, Sarah L. Arnold.

CONTENTS OF NUMBER II.

LESSONS AND EXERCISES FOR SEASONS.

Suggestions for Christmas Program—Christmas Belle—December in the Primary Room—Christmas History and Customs—Legend of the Chrysanthemum—In the Lands of Ice and Snow—In Esquimaux Land—Valentine's Day—Lincoln Exercises—Hour With Washington—Patriotic Day Program—Arbor Day Exercises—Trees and Their Uses—Growth and Structure of Trees—Arbor Day Program—Memorial Day—Stars and Stripes—Flag Raising Exercise—Balch's Salute to the Flag—Flag Raising Days—Outline of Bird Study—Flag Day Exercise.

NATURE AND CORRELATED WORK—An Ingenious Contrivance—Cabbage Butterfly—Some Common Butterflies—Course of Study (Sarah C. Brooks)—Gentians (Correlated Lesson)—Outline for Correlated Work—Bird Life in Winter—Reading Lesson (1st grade) The Woodpecker—Related Lessons on the Sun—Study of Leaves and Birds—Observation of Trees—Report of a Field Lesson.

GEOGRAPHY—Study of a Brook Basin—A Field Lesson with Little Children—Mediterranean Cruise.

MISCELLANEOUS—A Word to Country Teachers—Art in School—Trials and Beauties of Winter—Æolian Harp—Learning School Songs.

POETRY—God Bless Our Fatherland—Abraham Lincoln—The Nation's Sorrow—Washington—Hail Columbia—Birthday of Washington—God Save the Queen—Concord Hymn—Selection from Bryant—Twenty Miles Away—Ratlisbon—John Henry Jones—Little Maid's Reply—Yankee Doodle—To Lincoln—Ode to Ethiopia—Patriot's Remembrance—Decoration Day—Starry Flag—Memory's Wreath—Our Country—I owe to the Brave—Rest in Peace—An Offering to the Soldier—The Deserted Plantation.

BIRDS AND INSECTS—Cats' Claws, Who Has Counted Them—Jackdaw—Mrs. Wasp and Mrs. Bee—Crickets' Ball—How the Woodpecker Knows—Legend of the Birds—The Robins Sing in the Rain—Bob White—A Bird's Nest—Throstle—The Rabbit, The Lion, The Cat—The Tradesmen—Birds of Spring—The Jay—The Song of the Bee—The Butterfly—The Dead Pussy Cat.

FLOWERS AND PLANTS—Gentian—Fringed Gentian—Milkweed Pod—Golden Rod—Seed Cradles—How the Leaves Came Down—Corn—October Woods—Little Aster Service—Chrysanthemums—Flowers in the Window Sill—Buttercups and Daisies—Pussy Willow—Pussy Willow—The Alder Catkin—Leaves and Flowers—The Little Plant—Daisies—How Marigolds Happened To Be—Lilacs—Two Trains to Poppy Land—Old Fashioned Roses—Butterflies and Flowers—My Strawberry.

NATURE—Raindrops—The Bonny Bicycle—A Bowl of Honey—River Song—Suppose—The Sunbeam—Butterfly and Thistle-Ball—Little Drops of Water—Long Ago—Talking in Their Sleep—The Wind—The Wind—Joy for the Sturdy Trees—Forty Years from Now—In the Swing—Which Tree is Best—Discontented—Maple Tree—Whispering Pine—Planting the Tree—Tree Party—The Oak—Wayside Inn—Horse Chestnut—Plant the Apple Tree—Then It's Spring—The Cottonwood Tree—Little Brook—Little Snowflakes—Little Things—Waterproof Folks—The Heart of a Tree—The Critic—Plum Tree Dancers.

EXERCISES AND POEMS FOR SEASONS—Harvest Exercise—Autumn—Autumn Song—Autumn—November—Down to Sleep—Thanksgiving—A Sober Month—Harvest Hymn—Thanksgiving, The Reason Why, Dot's Thanksgiving, Praise God, Little Paul's Thanksgiving, All Things Beautiful, We Thank Thee, Signs of Thanksgiving, Thanksgiving—Little Jack Frost—Landing of the Pilgrims.

CHRISTMAS POETRY—Yule Tide—Christmas Tree—God Rest Ye—Christmas Stockings—Santa Claus' Petition—Little Town of Bethlehem—Bird's Christmas—A Feel in Christmas Air—Christmas Carol—Hang up the Children's Stockings—Address to Santa Claus—Old Santa Claus in His Den—Snow Fairies—The Two Brothers—What the Winter Brings—Christmas Bells—Christmas Hymn—Children's Friend—Charity—A Christmas Secret—Christmas Carol—In Bethlehem of Judea—Old Janus—Winter for Boys—Patriotic Exercise—Between Winter and Spring—Spring Cleaning—Return of Spring—When the Green Gets Back on the Trees—April Days—The Months of Folly—Decoration Day—Memorial Day for Wee Ones—Memorial Flowers—Praise June—Effie's Thoughts—Thanksgiving—Snow—Jolly Old Winter—Sunshine—The Months.

MUSIC—Norwegian National Hymn—Swedish National Hymn—Bruce's Address—Battle Prayer—The Marseillaise—Good Morning—Salute to the Flag—Scale Studies—We Have Been Wandering—A Spring Song—Till We Meet Again—We Thank Thee—Sunbeams—In Merry Autumn Time—Lullaby and Good-night—Fairlyland—The Swallow and the Sparrow—Christmas Song—Thanksgiving—Flowers That Bloom—Trees in Winter—Air Fairies—Little Gardener—Good Morning—Bring Forth the Flowers—Vapor Song—Swallows—East Wind—The Good Die Not—Lullaby—Parting Song.

CONTENTS OF NUMBER III.

JANUARY—Solution and Crystallization; The Eskimo; Lesson on Coal and Mining—Dr. Burroughs' Method—Kindergarten in Primary Room—Only To-day—Happy New Year; Don't Give Up; Winter Song; Procession of the Months; The New Year; What the Coal Says—Bed in Summer; A Useful Gift; A Norse Lullaby (a song); The Little Fir Trees; A Vain Regret; To the New Year—Illustrated Poem—The Pine Tree—Music of the Pines—Miriam (a story of a child).

FEBRUARY—A Boy's Remonstrance (poem)—Hurrah for the Flag (poem)—Meeting Washington (an anecdote)—Mount Vernon (poem)—The Study of Washington—Tributes to Washington—Exercise for Washington's Birthday—A Lincoln Program—The Bravest Battle (poem)—Memory Gems—Decorations and Programs—Patriotism for the Little Ones—Noted Birthdays in February—Washington Memorial Exercise—Dialogues—The Little Maid's Reply—Saint Valentine's Day—February (poem)—Paper Making—Birthdays—Something About Lowell—Memory Gems from Lowell.

MARCH—Classification in Country Schools—Memory Gem from Whittier—With the North Wind—Poetry, March; March; Mrs. Red Squirrel; Gaining Wings; Memory Gem from Clarence Ury—Spring Lessons on Flowers—Program for One Week Spring Term—Poetry, Pussy Willow; One, Two, Three (a march song); Finding Fault; What Was It? Which One?

APRIL—Tree Planting (poem)—Arbor Day Thoughts—Arbor Day with Little Folks—An Arbor Day Collection—Arbor Day Exercises—The Oaks—The Lonely Pine Tree (story)—For Arbor Day (poetry), Planting Trees; The Tendril's Faith; An Arbor Day Tree; The Raindrops; Memory Gems from Smith and Cary; Planting a Cherry Tree—At Happy Easter Time—School Gardens—Escape at Bedtime (poem)—Memory Gems from Lowell.

MAY—A May Day Program—Program for Decoration Day—Quotations from Lowell—The Grand Advance (poem)—For Lincoln—Poetry, Lincoln's Favorite; Barbara Frietchle; The Flag; Great Men, Washington; George Washington—Patriotism—Flag Facts—Properties of Our Flag—The American Flag—Memory Gems—Poetry, Band of Mercy Hymn; A New Year; The Little Philanthropists—Correlated Lessons—Exercises in Sense Training—A Little Girl's Wonder (poem)—Memory Gem—An Afternoon with the Birds—Poetry, In the Orchard; My Strawberry; The Quickening of the Spring; Flower Song (music); The Maiden and the Blue Bird; May Day; In Apple Tree Town; "A million little diamonds"; Memory Gem—Analysis of Bird Gems—Why Some Birds Hop and Others Walk—An Eye to the Birds—The Coyote and the Woodpecker—Foreign Lands (poem)—A Queer Bird (poem)—My Serenade (poem).

SEPTEMBER—September—Our New Teacher—First Day in Primary Room—Days of the Week—Jean Ingelow—Your Own Geography—Review Days—God Give Us Men—"Ill fares the land"—Common School Examinations.

OCTOBER—A Letter to Mother Nature—The Autumn Jewel—A Study of Columbus—At the Sign of the Goldenrod—A Walk with a Naturalist—Grasshopper Music and Verse—Little Bird, Little Bird.

NOVEMBER—Thanksgiving (Illustrated)—Jack O'Lantern; A "Bird's-Eye" View—Harvest Is Come; Thanksgiving—Thanksgiving; Thanksgiving Letter; The Cricket Fiddler; Eugene Field; Bedtime; The Bill of Fare—November Lessons: Lesson on the Squirrel; Lessons on Nuts; Lesson on Indians; Oral Number Work—Oral Number Work—Patriotic Thanksgiving Exercise—A Strange Plant—A Thanksgiving Hymn; Smile a Little; Memory Gems—Kindergarten Occupations in the Primary Room—November memory gems—A Talk on the Seed—Literature in the Primary Room—Hints on Map Making.

DECEMBER—Christmas Tributes from the nations—An Eastern Legend; To Prevent a Mistake; Christmas Joy; Where? A Christmas Eve Thought; Santa Claus—Beautiful Snow; Good Night—A Christmas Turkey (story)—The Bird's Christmas Dinner (story)—The Little Christmas Tree (poem)—Imitation Japanese (poem)—The Stockings (poem)—Piccola (a story)—Memory gems—Whittier Memorial: For Primary Grades—For Grammar Grades—A Whittier Exercise—Wordsworth's Attitude Toward Children—Memory gems—Norse Mythology—Australian Poetry; My Jack Frost; "New occasions teach new duties".

MISCELLANEOUS—Catkins (poem)—Use of Chalk in the Schoolroom—March, April, May—The Little White One; The Starry Skies; October; November; December; January; February; March; April; May—Our Common Cereals: Wheat, Rye, Barley—Poetry: Don't Give Up; Robert of Lincoln; One, Two, Three; Springtime Summons; To the Dandelion

PRIMARY SCHOOL LEAFLETS.

Volume I. The Sun, Pheton, The Snow.—Our Flag, The Boy Washington, The Man Washington, Joan of Arc.—Winds.—Spring, Pussy Willow, Rain, Dandelion, Little Brown Seed.—Little Dandelion, What the Flowers Wish.—The Violet, Anemone.—The Frog, Snail, Crayfish.—September Aster, Goldenrod.—Milkweed, Thistle, Ants, October.—The Mayflower, New Land, Fruit, Thanksgiving Squirrel.—The Madonna, The Stars and the Child, The Christmas Story.

Volume II. The Snowflake Fairies, The Snow, A Trip to Cloudland, The Star.—Abraham Lincoln.—The Little Hiawatha.—Hiawatha's Canoe, The Cary Tree.—More About the Cary Tree, The Young Soldier, Take Care, The Drummer-Boy's Burial, The Red and White Roses.—Story of Little Caterpillar, Caterpillar and Robin Redbreast, Sleepy Little Caterpillar, Little Butterfly.—The Ants and the Grasshopper, The Pea Blossom.—The Three Bears, The Pea Blossom concluded.—The Lion and the Mouse, Why Chipmunks Have Stripes.—The Christmas Bells.

Volume 2½. Little Red Riding-Hood and picture.—Little Cedric, adapted from In Storyland (illustrated).—King Aeolus and the Bag of Winds.—The Easter Hare.—A Little Morning-Glory Seed.—Clytie (illustrated): The First Dandelion.

Volume III. The Seedlings, Thistle Song, Goldenrod, The Apple Tree, The Milkweed.—Going Away, Little Jack Frost, The Grapes, The Anxious Leaf.—What the Squirrel Said, The Flowers' Sleep, The Pumpkin, How Patty Gave Thanks.—What the Christmas Tree Said, The Stars, The Birds' Christmas.—The New Year, The Snowflakes, In Eskimo-Land.—Old Abe, The Snow Man.—March, Spring and Her Helpers, A Windy Story.—The Easter Lily, Tree Talk.—The Violet, The Thirtieth of May.—The Bees, The Dandelion's Birthday.

Volume IV. Quadrupeds, Called Fourpaws. It is a gem. It was edited by Nellie Walton Ford, author of "Nature's Byways." It treats, the Cat, Squirrel, the Fox, Lamb, Bear, Deer, Rabbit, Cow, Horse, Dog.

SPECIAL OFFER.

School Room Methods and Nature Study, 3 volumes, each 25c.....	\$.75
Primary School Leaflets, volumes 1, 2, 2½, 3 and 4.....	.45
Review of Education, 10 numbers.....	1.00
Total.....	\$2.25

All for \$1.50 .

YOU CAN'T AFFORD TO MISS THIS VERY SPECIAL OFFER.

A. W. Mumford, Publisher,

203 MICHIGAN AVENUE,

CHICAGO.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price : Two cents each assorted as desired; the 456 for only \$4.56; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

- | | | |
|----------------------------------|--------------------------------------|--------------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Turnstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parrakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowned Pigeon. |
| 21 Bluebird. | 72 Sora Rail. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbill. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Wood pecker. |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | 147 Bartramian Sandpiper. |
| 47 Indigo Bird. | 98 Snow Bunting. | 148 Nightingale. |
| 48 Night Hawk. | 99 Junco. | 149 Roseate Spoonbill. |
| 49 Wood Thrush. | 100 Kingbird. | 150 Dickcissel. |
| 50 Catbird. | 101 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cineraria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany—(Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 } New England Aster.
- 347 } Late Purple Aster.
- 348 Wild Yellow or Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 } Fringed Gentian.
- 354 } Closed or Blind Gentian.
- 354 } Tall or Giant Sunflower.
- 355 } Black-eyed Susan or Oxeye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowls.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-duck.
- 372 Red-breasted Sapsucker.
- 373 Prometheus and Sceloparia Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinnamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Murrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel, Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein, Moth Mullein.
- 424 Medicinal Plant: Cocoa Fruit.

\$4.10 FOR \$2.00

A Combination Offer That Means Something.

BIRDS AND NATURE (one year).....	\$1.50
REVIEW OF EDUCATION (one year).....	1.00
GAME OF BIRDS.....	.35
GOLDEN PHEASANT (Colored Picture).....	.25
LITERATURE GAME.....	.25
GAME OF INDUSTRIES.....	.25
TWENTY-FIVE PICTURES (From Birds and Nature).....	.50

**ALL FOR ONLY
\$2.00**

The total amount of value **\$4.10**

BIRDS AND NATURE—Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by color photography. It is the only periodical in the world which publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"Certainly no periodical, and probably no book, on birds ever found anything like such favor with the public as **BIRDS AND NATURE**."—*Evening Post, New York*.

REVIEW OF EDUCATION—An educational review of reviews.

GAME OF BIRDS—Illustrations of popular birds, in colors true to nature, on 52 finely enameled cards 2½x3½ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

GOLDEN PHEASANT—A beautiful Picture for framing. Printed in natural colors on fine paper 18x24 inches.

LITERATURE GAME—500 Questions and Answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

GAME OF INDUSTRIES—Educational—400 Questions and Answers on the great industries of our country. 100 cards, 2½x3 inches.

REMEMBER—A year's subscription to **BIRDS AND NATURE** and **REVIEW OF EDUCATION** alone amount to \$2.50. If you now take either magazine, or both, your subscription will be advanced one year.

A sample of both magazines for a dime and two pennies—12 cents in stamps. Send for Catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

OF BIRDS OF LAKESIDE AND PRAIRIE, \$1.00.

MY DEAR SIR:

After having read your late book entitled "Birds of Lakeside and Prairie," I am convinced that it will have a large sale because you have succeeded in making indirectly a strong, sympathetic appeal to humanity in a most charming manner for the preservation of the feathered tribes. For this reason your work forms the very best working tool for all societies organized for the protection of birds, because the gentle, persuasive style of your writing will produce better and more permanent results in missionary work than all the laws enacted for that purpose.

Chicago, Dec. 9, 1901.

ALEXANDER J. RUDELPH,

Asst. Librarian Newberry Library.

1,000 Words TO SPELL, MARK, USE AND DEFINE.

Flexible Binding, 15c. Special prices for class use.

The list is the result of actual experience. Words misspelled by teachers in their correspondence and words misused by teachers during visits at their schools, were jotted down, and these, with a few from examination papers, make the list.

The arrangement is: The word spelled. The word marked according to Webster. A definition or a sentence in which the word is correctly used. Pages of ruled paper for preservation of troublesome words are added as part of the book.

Designed for use in Summer Schools and Institutes. It is proving very popular with advanced classes in spelling, in academies and high schools. It is just the book for the Seventh and Eighth Grades, and for advanced pupils in Country Schools.

It was indeed an inspiration for the day to be opened, as it always was, with a lesson that was universally prepared,—an inspiration not only to the student teachers, but as well to the instructors, who, I may confess, were sometimes put to shame by the wonderful animation displayed by the students toward this part of their work. I feel certain that this new book will receive a hearty welcome by teachers and pupils.—*E. E. McIntire, Superintendent of Schools.*

SCHOOL JOURNAL COMPANY, Minneapolis, Minn.

SOUTHWESTERN & TEACHERS & AGENCY.

The South and West offer better advantages to aspiring teachers than any other section. **THE SOUTHWESTERN TEACHERS**

AGENCY, Nashville, Tenn., does a very successful business in that field. For full information write to **CLAUD J. BELL, Proprietor.**

"Birds of Lakeside and Prairie," just off the press of A. W. Mumford, is the work of Edward B. Clark, a Chicago newspaper man, who has made a name for himself as a writer on bird life. The book is splendidly illustrated with sixteen full-page color photographs. These studies of bird-life should be of peculiar interest to Chicagoans, for they were made right here in the city parks and in the suburbs. The true home of the bird is the country, but the feathered visitors do not entirely forsake their city friends. Indeed, Mr. Clark has found an astonishing variety of them and is a mighty hunter—with the opera-glass. He is alone in his work here in the West and has done for our birds what Bradford Torrey and others have accomplished in the East. The narrative of his hunting trips is interesting and has a distinctive literary charm.—*Chicago Inter-Ocean*.

I have nothing but words of praise for your magazine. Besides being instructive and entertaining it contains the finest colored illustrations of birds, animals, etc., I have ever seen. I shall certainly do all I can for you in the way of introducing your books.

MRS. MILTON KOONS.

Walnutport, Pa., Dec. 7, 1901.

BIRDS AND NATURE fills a long felt want with me, and I do not mean to miss a number.

Respectfully,

Sharon, N. Y., Dec. 3, 1901.

LUMAN CARL.

BOUND VOLUMES OF "BIRDS AND NATURE"

Do you wish to know about the volumes of BIRDS
and NATURE? Read these words of praise:

Enclosed find money order for \$8, for which please send me four double volumes, one-half morocco, BIRDS AND NATURE. I shall want Vol. 9 and 10 when complete.

Clemson College, S. C., April 29, 1901.

P. H. ROLFS.

Books received, and I shall want Vol. 9 and 10, in half morocco as soon as they are out.

Salt Lake City, Utah, July 7, 1901.

F. A. TIMBY.

Put me on the list for bound volumes as fast as issued.

Leavenworth, Kans., May 6, 1901.

PAUL B. JOHNSON.

Hereafter please send me the bound volumes as soon as they come out.

Youngstown, Ohio, Nov. 22, 1901.

WM. W. ZIMMERMAN.

Enclosed find check for my subscription to BIRDS AND NATURE and for binding two volumes of my books. These magazines are a delight, and though I have little time to peruse them at present, shall have them bound and reserve them for a delightful future treat.

Yours truly,

Louisville, Ky., Nov. 4, 1901.

HATTIE L. HEFT.

Set of ten Volumes, cloth, - - - \$10.00

Set of five Double Volumes, half morocco, - 10.00

A. W. MUMFORD, Publisher
203 Michigan Avenue

CHICAGO

—PRAISE FOR— BIRDS AND NATURE

(\$1.50.)

BIRDS AND NATURE, published by A. W. Mumford, Chicago (\$1.50 per year), is a beautiful magazine devoted to nature study, with birds as the chief attraction. At least four bird-plates printed in natural colors appear in each issue. Birds' eggs, flowers, mammals, fish, insects, fruits, shells, minerals and gems all find a place on its pages. The reading matter is excellent. The magazine should have many readers among children and young people, as it cannot fail to exercise a fine educative influence.—*Epworth Herald*.

Enclosed please find \$3 for **BIRDS AND NATURE** for 1902 and 1903. I cannot get along without it—it is the best on the market. ALBERT A. BOTT.

Rochester, N. Y., Dec. 17, 1901.

I am exceedingly pleased with the publication—**BIRDS AND NATURE**—it is by far the best of the kind I have ever seen and affords a continual source of amusement and instruction to my family. The monthly numbers are eagerly watched for and mentally devoured.

Brussels, Ont., Dec. 5, 1901.

W. M. SINCLAIR.

The **BIRDS AND NATURE** magazine has recently reached the boy and it gives me pleasure to assure you of the delight he finds in the publication. HENRY L. TAYLOR.

University of the State of New York, Albany, N. Y., Nov. 27, 1901.

Every lover of Nature and Art must commend the beauty and value of **BIRDS AND NATURE**. We eagerly look forward to the arrival of each new copy. BENEDICTINE SISTERS.

School of St. Mary, Winona, Ill., Oct. 20, 1901.

I have been a subscriber to **BIRDS AND NATURE** since it was first issued and like it better than ever. ENGWARD JEPSEN.

Minneapolis, Minn., Oct. 29, 1901.

A. W. MUMFORD, Publisher,

203 Michigan Avenue, Chicago.

OF BIRD LORE IN JINGLES. 60 Cents.

"Bird Jingles," by Edward B. Clark, is a picture book which may be particularly commended for its excellent colored pictures of birds which have evidently been photographed from life. A word of introduction explains that only those birds were selected whose traits or names lent themselves readily to the giving of some point to the descriptive verse. Let the rhythmic verse speak for itself. It has a moral truly, but are we training the ears of future poets?

Drop a tear for the Herons, whose feathers are snowy,
For woman has found that for bouquets they're showy;
And so when she goes to the milliner's mart,
At the fiat of fashion she hardens her heart.
Nesting herons are slain with no pang of regret,
To make certain milady may wear her aigrette,
May haunted she be till she draws her last breath,
With the cries of bird babes slowly starving to death.

However, the fine sketches will teach the little ones to recognize woodpeckers, magpies, brown thrashers, house wrens, shrikes and whip-poor-wills, and so this Christmas book has a mission.—*From Chicago Post.*



**THE SMITH PREMIER
OCCUPIES AN
IMPERISHABLE POSITION
IN THE BUSINESS WORLD.**

Unquestioned superior merit annually adds thousands of names to the long list of Smith Premier users, representing every line of trade and every profession. It is held in lasting regard at home and abroad.

ILLUSTRATED CATALOGUE FREE.

The Smith Premier Typewriter Co.

115 Clark Street, Chicago, Ills.

A B C Book of Birds.

By MARY CATHERINE JUDD.

A Book for Children, both large and small, price \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

Mary Catherine Judd has written an A B C book of birds, which contains twenty-six as handsome colored plates of as strikingly plumaged birds as it is possible for the color photographic art to produce. The first illustration is that of a fine specimen of the great bald eagle backed by the American flag. To make the bird fit the first letter of the alphabet it is called, as rightly it should be, the American bald eagle. Among the other birds shown are the gorgeons flamingo, the resplendent cardinal, the ruby-throated hummer, the great diving loon, the familiar meadowlark, and the practically extinct wild pigeon. Miss Judd has given a catching little rhyme with each bird, as well as an accurate prose description of the bird and its habits. The color scheme of both covers is beautiful. The bluejay adorns the front of the book, while the cardinal, as natural as life, lends his beauty to the back. No better child's book can be found.—*Chicago Record-Herald*.

The "A B C Book of Birds" is designed for children, large or small, with nonsense rhymes for little ones and prosy sense for older ones. Every letter in the alphabet is represented by a bird, beginning with the American bald eagle and ending with the zoo-zoo, or mourning dove. There is a jingle for each bird and the author then tells in prose some interesting facts about the bird represented. The book is as instructive as well as pleasant one for children, who can learn therefrom many things about birds. The same publisher has issued a very attractive bird calendar for 1902, which sells for 50 cents.—*Utica Press, New York*.

Photographs of birds in natural attitudes and colored in exact imitation of the real colors of the feathers, and combinations of colors peculiar to our wild songsters, are the features which recommend the "A B C of Birds" to the little folks. It is hardly enough to say that the pictures reflect life, for they are so remarkably good. Mary Catherine Judd, the sponsor of the book, has written nonsense rhymes for the little ones and prosy sense for older ones. The paragraph intended for the grown-ups gives the Latin and common names of the bird, something about its habits and its home. The nonsense rhyme begins with the letter of the alphabet, and jingles the words together in a way which children love to hear.—*Chicago Evening Post*.

This "A B C Book of Birds," as its title indicates, is a volume treating of birds, and primarily intended for children. The order of the alphabet is followed in the selection of birds for description. Thus the letter A represents the American bald eagle, B the bluejay, C the cardinal grosbeak, and so on throughout the alphabet.

The descriptions are in rhymes of from one to five stanzas, easily comprehended and memorized by the child. Each of these descriptions also acquaints the child with some of the most prominent characteristics of the bird described. Moreover, each description is accompanied by a full page illustration of the bird described, the illustration faithfully reproducing the form, coloring, and, whenever possible, the size also of the bird.

For children this volume is not only exceedingly attractive but also instructive. At the same time that the alphabet is being learned the memory is being exercised as the rhymes by repetition are being committed, and the rhymes almost unconsciously familiarize the child with the principal characteristics of the birds described.

And the book is not without its adaptation to older people, for each illustration and child's rhyme is followed by a page paragraph giving a more technical description for maturer intellects.—*Denver Post*.

For the very little ones Miss Mary Catherine Judd has prepared, and A. W. Mumford of Chicago has published, "The A B C Book of Birds." The illustrations in color are marvels of the lithographer's art, presenting the various birds in all the brilliancy of their coloring, and in surroundings, as to color, true to life. Each illustration is accompanied by a few lines of verse for the child, while on the opposite page is a paragraph in prose giving the scientific name of the bird and a few lines of scientific information about them which will help the grown-ups to explain the pictures more intelligently to the little ones.—*Minneapolis Journal*.

An Alphabet of Commendation for Birds and Nature (\$1.50)

- An admirable magazine and I shall commend it to others.
Elizabeth, N. J., April 10, 1901. WM. D. HEYER.
- "BIRDS AND NATURE is the most beautiful and instructive magazine I have ever seen."
Gallen, Mich., June 4, 1901. LAURA B. HOBBS.
- Continue the magazine. We are all delighted with it.
Philadelphia, Pa., May 4, 1901. MRS. RUSSELL THAYER.
- Delighted with every number of the magazine.
Cincinnati, O., Sept. 17, 1901. FRED W. DEARNESS.
- Excellent magazine and would prove a blessing in every home, especially where there are children.
Granville, O., Dec. 17, 1901. D. THOMPSON.
- Find your pictures most useful in kindergarten. The children admire them. They are very artistic and beautifully colored.
Roxbury, Mass., April 27, 1901. MAUD A. WRIGHT.
- Greatly pleased with the book, and the more pleased the more birds you put into it.
San Augustine, Tex., July 9, 1901. REV. GEO. CROCKET.
- Have been in national history work for twenty years and must say BIRDS AND NATURE surpasses any publication so far for the student of nature.
Tuckerton, N. J., June 17, 1901. DR. J. B. OLMSTED.
- I must have BIRDS. Keep sending it, please.
Fort Williams, Canada, April 4, 1901. F. G. SIMPSON.
- Just the thing we have been looking for. BIRDS AND NATURE fills a long felt want. Send Vol. 10 as soon as ready.
Anadarko, Okla., Dec. 3, 1901. TOM REID.
- Kindergarten, school and college ought to be the better for BIRDS AND NATURE. My pupils know every little bird neighbor from association with the different numbers of the magazine.
Kansas City, Mo., Dec. 15, 1901. CONSTANCE LESBOY.
- Like your paper very much and receive your little magazine each month gladly. Some of the books have very nice stories in them. Some of the boys here in this school like your books, too.
Pharm Farm, Salem, Mass., April 10, 1901. B. L. HASKELL.
- More than pleased with your magazine.
Muhlteo, Wash., April 17, 1901. MRS. R. WATERS.
- None of our magazines give more pleasure than BIRDS AND NATURE. It is delightful.
Rumford, R. I., Oct. 10, 1901. CLARA E. WALKER.
- One of the most helpful magazines published. We would not be without it.
Whatcom, Wash., April 23, 1901. N. H. ABBOTT.
- Pictures are fine. I wish all my friends could have them.
Wahjamega, Mich., July 3, 1901. MISS S. B. COVERT.
- Quite delightful every month is the visit of BIRDS AND NATURE. Send it on another year.
Dayton, O., Dec. 5, 1901. BEN JOHNSON.
- Right well have you succeeded in making a start to popularize bird study in your delightful, instructive, entertaining BIRDS AND NATURE. Long may the magazine live.
East Springfield, O., Dec. 20, 1901. WM. MONTGOMERY.
- Strictly up-to-date is your publication, BIRDS AND NATURE, and to my knowledge there is nothing better in its line.
Ionia, Mich., Nov. 16, 1901. O. M. ULRICH.
- The pictures are very life-like and the articles are most interesting and instructive.
Anderson, Ind., Nov. 12, 1901. P. J. CASEY.
- Unless I could have BIRDS AND NATURE to refer to constantly, I should never care to teach another day.
Northboro, Mass., Oct. 4, 1901. EDITH VALENTINE.
- Very marked is the improvement in your publication, BIRDS AND NATURE.
Catskill, N. Y., April 26, 1901. C. H. VAN ORDEN.
- We find the magazine invaluable in our work.
Baltimore, Md., April 19, 1901. AGASSIZ ASS'N, Chap. 233 (A).
- Xtra fine is your magazine, BIRDS AND NATURE. The children enjoy it very much.
Rockford, Ill., Oct. 10, 1901. E. L. JENKS.
- Your paper is certainly fine.
Mendenhall, Pa., April 4, 1901. EARL MENDANALL.
- Zealous oversight is a pronounced characteristic of the management of BIRDS AND NATURE.
New York, Nov. 30, 1901. JOHN DICKY.

A. W. Mumford, Publisher
203 Michigan Ave. . . . Chicago

I enclose check for renewal subscription to BIRDS AND NATURE and for bound volumes. I would feel that there was something missing in my journey through life if I did not receive BIRDS AND NATURE.

Pittsburg, Dec. 23, 1901.

W. G. SCHIRMER.

DAVENPORT, IA.

I enclose money order in payment of my subscription to BIRDS AND NATURE, the finest publication of its kind I have ever seen. I would not do without it.

Yours truly,

Nov. 23, 1901.

GERTRUDE A. WYNES.

Enclosed I send you post-office order for \$1, for which please send me CHILD-STUDY MONTHLY for one year, commencing with the July number.

Sydney, Australia, Sep. 6th, 1901.

E. J. FORBES.

I have derived much information and pleasure from your magazine and can not do without it in my work at school.

Cincinnati, Ohio, Dec. 27, 1901.

A. HERMES.

Tite Grip
Weaving
Needle ...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

Sirs:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—BIRDS AND NATURE one year and a complete set of these Trees for only \$2.00.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Does This Offer Take? Somewhat!

Your offer came to me some time ago, but I was unable to avail myself of it until now. However, I wish my subscription to begin with the October number and I think that it will amount to the same thing. I also wish the three sets of typical Forest Trees in photogravure. I enclose the \$2 for the magazine and the pictures.

MABEL REED BENWAY.

N. Towanda, N. Y., Dec. 17, 1901.

Enclosed please find \$2 for BIRDS AND NATURE and a complete set of Forest Trees.

OLIVER H. HAM.

Portsmouth, N. H., Dec. 20, 1901.

Enclosed please find check for BIRDS AND NATURE one year and a complete set of Trees for the Staples Schools.

H. L. WALDRON.

Staples, Minn., Dec. 11, 1901.

A. W. MUMFORD, Publisher.

EDUCATIONAL REVIEW, \$3.00 } BOTH, \$3.00
REVIEW OF EDUCATION, 1.00 } ONE YEAR,

"We find the EDUCATIONAL REVIEW absolutely indispensable at every turn."—Michael E. Sadler, Director of Special Inquiries and Reports, Board of Education, London, England. September 13, 1901.

"To men like myself it is a sort of working library. Its volumes stand always at my elbow."—Professor Paul H. Hanus, Harvard University.

"The EDUCATIONAL REVIEW gains in strength monthly. I value the work as highly as any educational work I have among some thousand books."—Fred W. Atkinson, Superintendent of Public Instruction, Manila, Philippine Islands.

"It is difficult to see how the EDUCATIONAL REVIEW could be made more essential for us teachers and executives."—President Charles F. Thwing, Western Reserve University, Cleveland, Ohio.

"I have been a subscriber to the REVIEW since it started, and hope to continue—well, not until it ends, but until I go out of education and teaching."—Will S. Monroe, State Normal School, Westfield, Mass.

"The broadest and most able of the American periodicals devoted to education."—*New York Times*.

"An educational magazine of which the teaching profession may well be proud. There is nothing better in educational journalism in any country, and it has an editor who has convictions, and the courage of them."—*School and Home Education*, Bloomington, Ill.

"The REVIEW has from the first issue taken its place at the head of American periodicals devoted to education. It is, indeed, the first educational paper in America to win for our country the respect of educationalists abroad."—*Journal of Pedagogy*, Ypsilanti, Mich.

A. W. MUMFORD, 203 Michigan Avenue, Chicago.



BETWEEN



THROUGH FULLMAN SERVICE
BETWEEN CHICAGO AND



IF YOU ARE CONTEMPLATING A TRIP, ANY PORTION OF WHICH CAN BE MADE OVER THE CHICAGO & ALTON, IT WILL PAY YOU TO WRITE TO THE UNDERSIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.

The
Pioneer
Limited.

Famous
Train
of
the
World.

CHICAGO—ST. PAUL—MINNEAPOLIS

VIA

The St. Paul Road.

(Chicago, Milwaukee & St. Paul Ry.)

**Equipment and Service
Unequaled.**

Time tables, maps and information
furnished on application to

F. A. MILLER, General Passenger Agent,
Chicago, Ill.

PRAISE FOR BIRDS AND NATURE (\$1.50)

I am delighted with every number of the magazine.
Cincinnati, O. Sept., 17, 1901.

Fred. V. Dearness.

I assure you, I thank you very much for your very kind and generous offer renewal BIRDS AND NATURE, which I cheerfully accept. I will enclose a P. O. O. for Five Dollars for the 52 back numbers of BIRDS AND NATURE, and for the numbers for the remainder of the year. After that I hope to become a subscriber to the very neat and deserved popular magazine BIRDS AND NATURE.

Vancouver, B. C., Oct. 1, 1901.

G. W. Jamieson,
Prin. Mt. Pleasant School.

I enclose a check for \$6; for back numbers BIRDS AND NATURE, \$5; for the coming year, \$1.
Tannersville, N. Y., Sept. 25, 1901.

We prize the magazine BIRDS AND NATURE greatly and intend to continue our subscription indefinitely.

Dover, Me., April 2, 1901.

Mrs. Mary Grace Canfield.

Your magazine has given me the greatest pleasure ever since I took it. I look forward each month to its appearance and read it through from cover to cover.

Peabody, Mass., March 28, 1901.

David M. Cheney.

I received the different numbers of BIRDS AND NATURE sent me by you in very good shape, for which I truly thank you. I appreciate the little paper very much and shall do whatever lies in my power to increase its circulation and popularity.

Vancouver, B. C., Oct. 14, 1901.

G. W. Jamieson.

Please find enclosed Money Order of Five Dollars for the complete set of BIRDS AND NATURE from January, 1897, to December, 1901.

El Dorado, Calif., Oct. 16, 1901.

A. M. Drew.

I ran across a stray copy of your magazine for June, containing in addition to good reading and pictures, several offers of which I take the following if they still hold good: Offer No. 6, all the magazines to December, 1901, at \$5, and one year's subscription from then at \$1.50 and premium Birth of the American Flag, No. 4. I enclose M. O. for amount.

Mesa, Colo., Sept. 24, 1901.

H. K. Bogert.

The magazine is one of the finest I have ever seen of its kind.
No. Tisbury, Mass., Sept. 28, 1901.

Effie E. Littlefield.

\$4.20 FOR \$2.10

Another Combination Offer that Means Something.

BIRDS AND NATURE one year	\$1.50
*Ten Back Numbers BIRDS AND NATURE	1.50
60 Colored Pictures from BIRDS AND NATURE.....	1.20
The total amount of value.....	\$4.20

ALL FOR
\$2.10

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"It is one of the most beautiful and interesting publications yet attempted in this direction. It has other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little magazine abundant prosperity."—*Chas. R. Skinner, State Supt., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."—*Dr. Elliott Coues.*

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial reception."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls of my rustic retreat, 'Slab Sidee.'"—*John Burroughs.*

"When one considers the low price at which you sell BIRDS, the number and excellence of the plates are surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of BIRDS AND NATURE may be substituted for the ten back numbers.

A sample of this magazine and of The Review of Education for a dime and two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

Standard Literature for Schools

A Series of Choice Books for Class Reading and School Libraries.

AMERICAN HISTORY.

		List Price.	
		Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse-Show Robinson (Kennedy), No. 10	For 6th and 7th Years	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulwer-Lytton), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years	.20	.30
Rob Roy (Scott), No. 3	For 6th and 7th Years	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

FRENCH, SPANISH AND ROMAN HISTORY.

Alhambra (Lytton), No. 4	For 6th and 7th Years	.12½	.20
Last Days of Pompeii (H. S. Moore), No. 38	For 7th Year	.20	.30
Ninety-Three (Thackeray), No. 41	For 7th Year	.20	.30
Peasant and Prince (Irving), No. 41	For 6th and 7th Years	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (For Second School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (De Foe), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Robinson (Wyss), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne) (4 stories), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

Black Beauty (Sewall), No. 31	For 5th and 6th Years	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text	.12½	.20
Evangeline (Longfellow), No. 21	Full Text	.12½	.20
Five Great Authors No. 42	Each Selection Complete	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11		.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete	.20	.30
Silas Marner (Eliot), No. 43	Complete	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete	.20	.30

University Publishing Co., 43-47 E. 10th St., New York City.

THE REVIEW
OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. No. 7.
WHOLE NUMBER 69.

CHICAGO, FEBRUARY, 1902.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment.....	241
Talk to High School Pupils, Dr. Charles W. Elliot.....	247
Free School-Books, Dr. Elisha Benjamin Andrews.....	248
The Element of Inspiration in the Schools, Dr. Andrew S. Draper.....	253
Creative Manual Training, Professor Grant Beebe.....	256
The Relation of the Home to the Preparatory School, Rev. Endicott Peabody.....	260
What can be done for Children who never get beyond the Grammar School, Professor W. H. Benedict.....	264
Place of General History in the Schools.....	265
Plain Words on Teachers' Wages, William McAndrews.....	267
The Need of Training for the College Presidency, Professor Frank Pierrepont Graves.....	272
The Southern Educational Association, Mary Hall Leonard.....	276
Book Reviews.....	279
Educational Articles in the February Magazines.....	280

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$2.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

BIRDS AND NATURE: \$1.50

Your little magazine has given me much pleasure and the pictures have been scattered far and wide.

MISS S. GODFREY.

Annapolis Royal, N. S., Jan. 9, 1902.

Industrial Pictures.

Size 6 x 9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,

203 Michigan Ave.

Chicago, Ill.

FOR 75 CENTS

We will send the following three games to one address, prepaid. Or any one game sent upon receipt of price.

LITERATURE GAME, by A. W. Mumford. 500 questions and answers on English and American Literature. 100 cards, 2½ x 3 inches. Price, 25 cents.

GAME OF INDUSTRIES. 400 questions and answers on the great industries of our country. 100 cards, 2½ x 3 inches. Price, 25 cents.

GAME OF BIRDS. Illustrations of popular birds in colors, true to nature, on 52 finely enameled cards, 2½ x 3½ inches. Makes the identification of our birds simple and positive. Price, 35 cents.

These games are so interesting and instructive you'll certainly enjoy them. Just what you have been wanting for the school and home. Each game enclosed in case, with full directions for playing. Address

A. W. MUMFORD, PUBLISHER.

203 Michigan Ave., Chicago.

Beautiful Pictures, Catchy Verse

The Jingle Book of Birds

By EDWARD B. CLARK

16 Colored Plates

Price 60 Cents

This book is for both Children and the elders. The
lines are not jingles merely but jingles which have
a well rounded purpose and much of pith and point.
The color scheme of the cover is strikingly beautiful.
This book will make an appropriate Christmas gift.

Read what the Chicago Record-Herald critic says of the book :

"The Jingle Book of Birds," by Edward B. Clark, has the triple merit of being handsome, clever and reliable. Mr. Clark is one of the most thorough and enthusiastic ornithologists in Chicago, and has for years been a contributor to magazines and to the local press on the subject of birds. Instead of writing the customary "alphabet" he has preferred to be guided by the real nature of the birds, rather than by the letter with which each name begins, and has treated only those birds of which something pointed could be said. There are sixteen spirited "jingles" and the same number of full-page colored illustrations of typical birds, the pictures being unusually fine examples of three-color work. The book is an excellent one to put in the hands of children. Here is an example of Mr. Clark's jingles, taken from the one devoted to "the bluejay, a rascally thief," which closes thus:

It is queer how the people have made it a rule
That to call a man "jay" is to call him a fool,
For if they believe that the jay is a dunce
They'll find themselves fooled if they try him just once."

—Chicago Record-Herald, Nov. 23, 1901.

The Chicago Evening Journal says, after quoting from the jingles as length:

"Sixteen beautiful illustrations in colors—magnificent full-page picture—show the varied and wonderful plumage of some of Mr. Clark's feathered friends. Opposite each picture is a descriptive verse in big type. For children or young folks, or even for adults. 'The Jingle Book of Birds' is a very pretty possession. Mr. Clark deserves to be complimented on producing such a dainty and pleasing volume."

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago,

Birds of Song and Story

By ELIZABETH AND JOSEPH GRINNELL.

16 COLORED PICTURES.

PRICE, ONE DOLLAR.

There is a charm about the writings of both of these authors that will appeal strongly to all lovers of good literature, and especially so to all who love at once to read the printed page and the book of nature.

"Birds of Song and Story," by Elizabeth and Joseph Grinnell, contains a series of interesting sketches of the habits and peculiarities of birds. Appropriate poetical quotations relating to different songsters, written by well-known poets, are scattered through the volume. Many anecdotes, personal observations and historical references enrich the sketches. The work is especially written for children, using simple language and a pleasing style of diction likely to hold the attention of the reading boy or girl. The illustrations are excellent, being colored photographs of birds in natural surroundings in the grass, trees or beside the nest. The coloring is true to nature and an acquaintance with the pictures will aid the child in identifying the birds in the trees.

Please send me 5 copies of Birds of Song and Story, Grinnell, by express; 45 copies fast freight.

J. S. GLASSCOCK.

Pasadena, Cal., Nov. 29, 1901.

A. W. MUMFORD, Publisher,
203 Michigan Avenue, Chicago, Ill.

- - The Children's Hour - -

A Song Book for the School and Home, by Frank L. Sealy, Conductor of the Newark Madrigal Club, Accompanist for Walter Damrosch in the New York Oratorio Society, etc.

A NEW SONG BOOK

With arrangements from Abt, Schumann, Reinecke, Mendelssohn, Feaca, Peel, Gade, Gluck and others; melodious songs of pronounced carrying, wearing and singing qualities, quickly learned, and easily within range of children's voices. Over 5,000 used in the Newark Public Schools.

Cloth. 175 pp. Price, 50 cents.

MORE PICTURES IN NATURAL COLORS.

In addition to the 488 beautiful plates in colors true to nature which have appeared in Birds and Nature, we have printed the following, size 7x10, suitable for framing.
Two cents each; the twelve for 20 cents.

- | | |
|---------------------------------------|---------------------------|
| 1001 Gold-finch Tanager, Indigo Bird. | 1007 Red Fox. |
| 1002 Ruffed Grouse. | 1008 Lioness and Cubs. |
| 1003 Wood Duck. | 1009 Holland Water Scene. |
| 1004 Gray Squirrel. | 1010 Lake Steamer. |
| 1005 Geyser—Old Faithful. | 1011 Skating Scene. |
| 1006 Golden-eyed Ducks. | 1012 Mammoth Cave. |

Large pictures in the colors of nature. Price, 25 cents each or the 3 for 50 cents, postpaid.
All suitable for framing.

- | | |
|--|--|
| 1201 Golden Pheasant, life size 18x24 inches. | 1202 Song of the Lark (Breton) 18x21 inches. |
| 1203 Gladstone, the Grand Old Man, 18x24 inches. | |

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

BIRDS OF LAKESIDE AND PRAIRIE

===== \$1.00. =====

"Edward B. Clark of Chicago has made some exceedingly critical observations on 'Birds of Lakeside and Prairie,' and the same have been embodied in a book published by A. W. Mumford (Chicago-New York) sixteen handsome illustrations in color accompanying the text. Mr. Clark presents the bird life of the lakesides and prairies of the Middle West in a charming way, and invests them with an individuality as strongly marked as Thompson-Seton gives to his wild animals."—*New York World, Dec. 21, 1901.*

It has been a matter of wonder to many why some bird lover did not do for the Middle West what Borroughs and Torrey have done for New England and the eastern seaboard. A modest beginning has been made in this direction by a little book, 'Birds of Lakeside and Prairie,' written by Edward B. Clark, a local writer. Mr. Clark knows birds and loves them, and it is to be hoped that his little book will meet with such success as will justify him in putting out a more ambitious book in the future. The chapter titles of the book, attractive as they are, do not hold out false hope, and he who reads 'Birds of a Smoky City,' 'In Southern Hoosier Hills,' 'Spring on the Kankakee,' 'On the Trail of Pokagon,' will wish to know more of one who can write so charmingly of our feathered friends. There are a large number of fine colored pictures of birds."

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

CHICAGO, ILL.

————— \$4.10 FOR \$2.00 —————

A Combination Offer That Means Something.

BIRDS AND NATURE (one year).....	\$1.50
REVIEW OF EDUCATION (one year).....	1.00
GAME OF BIRDS.....	.35
GOLDEN PHEASANT (Colored Picture).....	.25
LITERATURE GAME.....	.25
GAME OF INDUSTRIES.....	.25
TWENTY-FIVE PICTURES (From Birds and Nature).....	.50

ALL FOR ONLY
\$2.00

The total amount of value \$4.10

BIRDS AND NATURE——Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by color photography. It is the only periodical in the world which publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.
"Certainly no periodical, and probably no book, on birds ever found anything like such favor with the public as BIRDS AND NATURE."—*Evening Post, New York.*

REVIEW OF EDUCATION——An educational review of reviews.

GAME OF BIRDS——Illustrations of popular birds, in colors true to nature, on 52 finely enameled cards 2½x3¼ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

GOLDEN PHEASANT——A beautiful Picture for framing. Printed in natural colors on fine paper 18x24 inches.

LITERATURE GAME——500 Questions and Answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

GAME OF INDUSTRIES——Educational—400 Questions and Answers on the great industries of our country. 100 cards, 2½x3 inches.

REMEMBER——A year's subscription to BIRDS AND NATURE and REVIEW OF EDUCATION alone amount to \$2.50. If you now take either magazine, or both, your subscription will be advanced one year.

A sample of both magazines for a dime and two pennies—12 cents in stamps. Send for Catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

—THE—
CHICAGO TEACHERS' FEDERATION
...BULLETIN...

A Weekly Paper Published by the Chicago Teachers' Federation.

The Federation is an organization of class-room teachers and includes more than three-fifths of the entire teaching force, from the kindergarten to the high school departments. It exists for the advancement and protection of the best interests of the schools, teachers and pupils. It was organized in the spring of 1897, and in 1898 secured the adoption by the Board of Education of a new salary schedule which provided for a substantial increase of salary. Owing to lack of revenue this schedule was made only partially effective in 1898, 1899 and 1901. In 1900 the Federation decided to investigate the cause of the great lack of revenue in Chicago, and for that purpose employed two of its members, who should devote their entire time to the work. This investigation led to the discovery of an enormous amount of property which had escaped taxation, thus decreasing revenue and increasing the burden of the ordinary taxpayer. The matter became eventually the subject of court proceedings and went to the Supreme Court of the state, which on Oct. 24, 1901, upheld every contention of the Federation and ordered the assessment of the property in question.

The Federation reaches 5,000 subscribers and its outside as well as local list is increasing daily. Subscription price is nominal, being only 50 cents per year. Advertising rates furnished on application to advertising manager at

OFFICE OF BULLETIN,

437 Unity Building, Chicago.

Beautiful Bird Calendar
→ FOR 1902 ←

This is the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

This is an exquisite bit of color work. Each of the six pages of the calendar (9½x12½) has upon one side a beautiful picture of some bird—the owl, bluebird, warbler, red-headed woodpecker, passenger pigeon and blue jay—while on the reverse side is a full, authentic, interesting description of the bird. Each bird is not only colored to life, but the pose and surroundings are equally true to life.—*Journal of Education.*

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

Of BIRDS AND NATURE, \$1.50.

"Birds and Nature" (Mumford, Chicago) continues to be a credit to its editor, Mr. William Higley, among the color photographs in the November number being beautiful plates showing pine grosbeaks, field sparrows, a Carolina wren, black poll warblers, a giraffe, a striped hyena, a miraki spider monkey and New Mexican turquoise specimens. The magazine abounds in matter delightful to naturalists and to all students of nature, old and young, interspersed with appropriate prose and verse selections.—*Boston Globe*.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity of terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 5½x8½ in. 75 cents.

A. W. MUMFORD, Publisher, - 203 Michigan Ave., Chicago.

Birds of Song and Story

By ELIZABETH and JOSEPH GRINNELL

16 Colored Plates. Price \$1.00.

Elizabeth and Joseph Grinnell, mother and son, the well-known southern California writers on bird life, have issued "Birds of Song and Story," a book treating of many of our familiar bird families in a charmingly interesting manner and in a style that is distinctively literary. Both the elders and the children can get a fund of bird knowledge from the perusal of the volume. Much of the folk lore touching our more familiar birds is given in the stories of the lives of our feathered friends. The authors tell how to get the birds about us and how to hold their confidence and their friendship. The titles of a few of the chapters will give an insight into the subject matter. There are "Singers and Their Songs," "Our Comrade, the Robin," "The Mockingbird," "The Hermit Thrush," "The Grosbeaks," "The Orioles," "Sparrows and Sparrows," "The Tanager People," "The Romance of Ornithology" and many others. There are sixteen beautiful full-page illustrations in colors. The book will inspire one to study the birds and to learn to love them.—*Chicago Record Herald*.

A. W. MUMFORD, Publisher

203 Michigan Ave. - - Chicago

An Extraordinary Offer!

A YEAR'S SUBSCRIPTION

—TO—

The Birds and Nature

AND TO

The Review of Education

TOGETHER,

FOR \$1.75.

Instead of the regular price, \$2.50.

A. W. MUMFORD, Publisher,

203 Michigan Ave., - - Chicago

Greatest of all Tonics
Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—
Invigorates the Entire System.

Review of Education One Year
—AND—
50 Colored Plates of Birds, Animals, Plants, Etc.
...\$1.50...

BIRD CALENDAR FOR 1902, 50 CENTS.

I enclose \$1.00 for two calendars. Kindly send them right away if possible.—E. T. SMITH, Philadelphia, Jan. 10, 1902.

**NEW SUPPLEMENTARY
READERS**

SEND FOR LIST.

FOUR OLD GREEKS—By JENNIE HALL, *Instructor in History in the Chicago Normal School.* Cloth, 224 pages; for introduction, 35 cents.

CHILD STORIES FROM THE MASTERS—By MAUD MENEFEE. Cloth, 104 pages; for introduction, 30 cents.

CLASSIC MYTHS—By MARY CATHERINE JUDD, *Principal of the Lincoln School, Minneapolis.* Cloth, 208 pages; for introduction, 35 cents.

NORSE STORIES—By HAMILTON WRIGHT MARIE. Edited by Katherine Lee Bates, *Professor of Literature in Wellesley College, Wellesley, Mass.* Cloth, 275 pages; for introduction, 40 cents.

A CHILD'S GARDEN OF VERSE—By ROBERT LOUIS STEVENSON. Illustrated by Miss Mars and Miss Squire. Cloth.

THE SUNBONNET BABIES' PRIMER—By EULALIE OSGOOD GROVER. Illustrated in colors by Miss Corbett, "the Mother of the Sunbonnet Babies." Cloth.

Rand, McNally & Company
Publishers

Chicago New York London

The Psychology of Childhood

By FREDERICK TRACY,

Lecturer in Philosophy in the University of Toronto.

With Introduction by PRESIDENT G. STANLEY HALL, of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

Send for complete descriptive list of
Heath's Pedagogical Library, 37 volumes.

D. C. HEATH & CO., Publishers

Boston New York Chicago

The Review of Education.

VOL. VII.

CHICAGO, FEBRUARY, 1902.

No. 7.

EDITORIAL COMMENT.

With the retirement, last October, of Dr. Seth Low from the presidency of Columbia University, Dr. Nicholas Murray Butler was elected acting president. No doubt Dr. Low felt the more willing to retire from the presidency to become mayor of greater New York, because he knew that the University could draw from its faculty a man eminently fitted to assume the executive responsibility which he was about to lay down.

At a meeting of the board of trustees of the University, held January 6, 1902, by a unanimous vote Dr. Butler was elected president of the institution. The citizens of the United States are deeply interested in their great educational institutions, and the trustees fully realized that among thinking people Dr. Butler had already been selected for this responsible office as the logical successor of Dr. Low. The trustees "found that apart from a group of older men like Dr. Harris and Presidents Eliot, Gilman and Angell, Professor Butler was already accounted the foremost educational leader of the country. This leadership had come about, first, through remarkable ability and training; and, second, through an even more remarkable gift of energy, coupled with the crowning gift of an untiring willingness to serve."

Preparing for college at Paterson, N. J., Dr. Butler entered Columbia in 1878 and at his graduation four years later received the highest honors. He then pursued a post-graduate course in phil-

osophy, Latin and Greek, receiving the degree Doctor of Philosophy in 1884. Studying for a year in Europe, he was appointed assistant professor of philosophy at Columbia in 1885, and was promoted to the full professorship of philosophy and education in 1890. He was then but twenty-eight years of age.

As an evidence of Dr. Butler's strong hold upon the respect and esteem of all persons interested in educational matters, it may be said that he is always welcome wherever subjects of educational moment are being discussed, and it may also be said that his words are always received only with commendation and approval. "It can truthfully be said of him, as of perhaps no other man, that he has delivered important educational addresses in every one of the fifty States and Territories of the Union, and is known personally to thousands of school superintendents, professors, and others engaged in educational work."

The *Review of Reviews* says of Dr. Butler: "Although a brilliant and profound scholar in general philosophy and psychology, the practical bent of his mind showed itself in his keen interest in the philosophical basis of education, with a view to the improvement of actual methods of instruction and of school organization. Thus as early as 1887, only two years after the completion of his student work, he was the moving spirit of the establishment of the New York College for the Training of Teachers, which now has national and international fame as the Teachers' College, and is in affiliation with Columbia University. Dr. Butler served four years—namely, from 1887 to 1891—as the first president of this teachers' college, while at the same time carrying on his

own teaching work in Columbia. He had maintained his domicile in New Jersey and had kept alive his active interest in the public affairs of that State; and in the period from 1888 to 1890, he served as president of the New Jersey State Board of Education, filling the post with notable force, spirit, and success, to the end that permanent reforms were brought about in the State's educational system. * * * As if all these were not enough, Dr. Butler was then establishing the *Educational Review*, of which he has always remained the editor and controlling spirit,—a monthly periodical which is regarded as the very first of its class by educational leaders at home and abroad."

Professor Edmund J. James, of the University of Chicago, has been unanimously chosen by the trustees of the Northwestern University as its president. Professor James has accepted and will assume the duties of the office within a short time. He is a graduate of the State Normal School at Bloomington, Ill., and also pursued his studies at the university of which he now becomes the president; at Harvard and at the Universities of Berlin, Leipsic and Halle. His experience in the educational field includes not only the work of the university, but also that of the high and the normal school. Northwestern University is to be congratulated on the wise selection of one who is known as an able educator, writer and speaker, and who is also actively interested in public affairs. Professor James assisted in the organization of the American Economic Association and was himself the organizer of the American Academy of Political and Social Science. Commenting on his appointment a Chicago paper says:

"The career of Professor James is sufficient proof that he has both the scholarship and the administrative ability that are needed in the office to which he has been called. It is significant, too, that his scholarship lies in the direction of a broader conception of the university and of closer relations with the outside world. It was in connection with the Wharton School of Finance and Economy that he first became prominent. It was in connection with the question of the technical training of business men that he made his last trip to Europe. His department at the University of Chicago has been that of university extension. He has devoted a great deal of time and thought to the

subject of commercial education in colleges. All these facts in his career as a college teacher indicate that in his policy as a college president he will be likely to try to bring his college into the current of present day life and to make it the home not only of the professions and of academic learning but of all the interests of the modern world."

In a recent issue of the *Chicago Tribune*, Professor Edmund James gives his ideas on education. He says:

Original research and investigation should be a prominent part of our university work. This is fundamental. Two great functions of a university are to advance scientific truth by original investigation and to use this science as a means of training young men and women. The modern university in its highest sense should include a group of professional schools with high preliminary requirements.

"Educators in all institutions, from the university down, should strive to co-operate with each other. In this way Chicago can be made as great in education and science as it is in commerce and industry. This city with its high grade of educational institutions is as plainly destined to lead in education in the Mississippi Valley as it is in the field of trade. Our efforts should be to hold aloft the highest ideals.

"The field which a university occupies in the educational world is determined largely by the policy of the institution and its surrounding conditions. The undergraduate work in an institution is not the best means of judging its position in relation to other colleges. There are possibly 100 colleges in the country whose undergraduate work is not dissimilar. A university may have other work to do than the training of its undergraduate students. The lead of Johns Hopkins in establishing a graduate school has been followed all over the country.

"In taking up any other branch of work than that which I am now engaged in at the University of Chicago, I should dislike to think that I would entirely sever my connection with university extension effort. The fact that one university in a country or a locality carries on university extension work with success is no reason why others may not do as well. It is necessary for the best work in this direction that many universities in different sections of the country should unite in the effort.

"University affiliation which binds several institutions together in close relationship has worked great good. Affiliation has been spoken of as an expensive process. It is expensive, but in my opinion it brings back to the university as much as it costs.

"Coeducation is an established condition, and its value has been proven. It is an ap-

proved method of education in the middle West and its success does not leave much room for comment or contention."

Dr. Henry Hopkins, of Kansas City, Mo., was unanimously elected president of Williams College at a meeting of its board of trustees held January 17, in the city of New York. Dr. Hopkins is the son of Dr. Mark Hopkins, who was for several years a successful president of Williams. The son received his early education under the tuition of his father, and entering Williams College graduated in 1858. He also studied at the Union Theological Seminary and was ordained in 1861. He served through the civil war as a field chaplain, by appointment of President Lincoln. Since the war he has been the pastor of two Congregational churches, and the second of these, the First Church of Kansas City, he has served since 1880. Dr. Hopkins is well known both as a scholar and as an educator. He also possesses unusual executive ability and Williams College is fortunate in securing his services.

In a recent report of Superintendent Livingston McCartney, of Hopkinsville, Ky., there is an interesting paragraph regarding school government. He says:

"The greatest anomaly in school life to-day is the form of government that prevails in most schools. The prevalent form of school government is monarchical, and it is unnecessary to describe to what extent the old antagonism between the ruled and the ruler prevails. It is too well known to need more than bare mention. That we should expect to develop self-control and good citizenship for a free republic in an atmosphere of monarchical repression is too preposterous to be debated. Yet this very attempt is constantly made in thousands of schools throughout the land. So strong a hold has this form of school government acquired, that the habitual attitude of some teachers toward their pupils is one of suspicion instead of sympathy; and in very many schools the pupils consider that classmate excusable who deceives his teacher. The parents themselves increase this high tension by relating their own achievements in eluding the vigilance of their teachers, or even in brutally mistreating them. How should we like

to live in a community where such antagonism existed between the citizens as a body and those who had been chosen to govern the community? We well know that in life the constant fear of the law is for only the refractory few, and that the few who are refractory are not upheld in their lawlessness by the community at large. This condition arises from the fact that the form of government is such that the law-abiding citizens have a voice in making the laws by which they are governed and in choosing the officers to administer those laws. Why should not the same privilege be granted to the pupils in a school? Is it urged that they are unfit for such responsibility? How many generations of tyrannical repression and punishment will happily usher in the day when they can be said to be prepared? No, the children must learn to govern themselves just as adults do; that is, by trying. Their efforts for a long time will no doubt be crude and many mistakes will be made, but the same is true of their seniors. It is an old law that 'that which is to be done, must be learned by doing it.' It cannot be learned by doing the opposite."

School government is one of the most important subjects among the many problems that confront the principal. It must be solved by a careful study of the environment and needs of the individual school. Methods that have proved excellent for one set of pupils will often fail when applied to another group. Principal George H. Rockwood, of the Austin High School, Chicago, in an address delivered at the fifteenth educational conference of the academies and high schools affiliated with the University of Chicago, said, while speaking of liberty against license in school government:

"Young people in our secondary schools are at just the age when the idea of personal liberty is being strongly developed. We live in a time when this idea is prominent, not to say rampant. Elementary-school children for the most part yield readily enough to the somewhat military methods of discipline necessary in dealing with large numbers, if this discipline be firm and just. But methods must be modified in the high school, and personal responsibility be developed. In the last years various schemes of self-government have been devised, some of them eminently successful. But how to allow necessary and wise liberty in the administration of a school and not let that liberty become license is a great, and I think for most of us, an unsolved, question.

"It was recently said of one of the most conspicuous schoolmasters in Massachusetts

that he is a "character builder." No higher compliment could be paid to the head of any school. Now, it is in the discipline and government of a school that opportunities for character building most present themselves. But character grows only when self-control is exercised. Give, then, to the youth of our secondary schools the high privilege of developing character by such plans of organization that they shall be free from petty restrictions and inspired to do right for its own reward."

"It is the common opinion that secondary schools are merely to meet the demands of the college. Colleges charge their shortcomings to failures and defects in the secondary system. In an important sense, problems of the secondary school must be solved primarily in light of a sound psychology rather than in light of preparation for college or a preparation for life.

"The primary aim of secondary education is not preparation for college. The aim of secondary education is suitable preparation for the period of adolescence; it is liberal education for adolescence. The emphasis must be upon the individual not upon his means for making a living. It is the work of the secondary school not to make a specialist, but to make a man who may become a specialist.

"This period of adolescence demands studies that call gradually into play his developing faculties. They must increase in difficulty and they must begin to satisfy his desires to understand and see reasons and relations. The nature of secondary education is determined by the nature of *things*, not by nature of college requirements."—*Dr. Nathaniel Butler*.

Questions relating to the welfare of our public schools were the subjects of liberal discussion at a recent meeting of the Englewood Woman's Club of Chicago. In the course of her address, one speaker stated that "the two institutions which contribute to the life and the training of the child were the home and the school." The parent plays an important

part in the success or failure of the school system. "The greatest obstacle today to progressive education is the indifference and apathy displayed by the parents of the children."

In their conduct toward the school, the speaker said that mothers may be arranged under three classes:

In the first class "is the mother who brings her child to school, leaves him there with a smile and never returns."

In the second class "is she who brings her child to school, hovers over him, feeling that he is not understood and cannot be understood, and that she must be there to interpret for him."

In the third class "is the mother who feels that she has a mutual responsibility with the teacher and co-operates with the work of the teacher at all times." Mothers of this class are a constant source of helpful encouragement to the teacher.

In a recent number of the *Manual Training Magazine* Mr. J. H. Trybom writes as follows of the manual training in the schools of Paris:

"Experimental work was begun in one of the Paris schools in 1873. In the school law of 1882 manual training was made a part of the regular curriculum in the elementary schools. Great difficulties were experienced in getting good teachers, and an additional 150 francs per year was paid to teachers who took a course and afterward taught manual training. At present 133 schools in Paris have an equipment for woodwork, and forty-three for metal work, besides the nine technical schools with equipments for high-school work.

"The characteristic feature of all the manual training in the Parisian schools is the close correlation between manual training, drawing, geometry, and some of the other subjects. Every model is drawn on paper before it is constructed in the workrooms, and there is no exception to this rule. This preparatory work is done in the class-room. Each pupil has a special note-book, and the study of the object to be made is taken up under four heads: (1) a study of the object from a technical point of view, (2) the geometrical problems illustrated by the model, (3) the drawing of the object, and (4) the use of the object.

"These efforts at correlation have influenced the courses of study. Among the models both in the wood and metal work we find the regular geometrical figures in abundance. The

square, the rectangle, the equilateral triangle, etc., are made even by the classes in metal work."

"There is a great deal of truth in the remarks made by Mr. Bryan, Mr. Barnes, and others at the alumni dinner of Illinois College about the value of the small college. There is no doubt that the institutions of the kind that Mr. D. K. Pearsons delights to honor have done a world of good. Nearness to home; inexpensive board, lodging, and tuition; democratic feeling; closeness of personal contact—these are merits that claim and get recognition. By all means let there be as many 'neighborhood colleges' as are necessary both for boys and girls who would not go elsewhere and for boys and girls who need the kind of training they there receive.

"But there is no reason why the number of small colleges should be recklessly increased. Certain things are possible only in the large and centralized college. Complete scientific apparatus, commodious laboratories, fully equipped libraries, wide acquaintance, largeness of life, cosmopolitan feeling—all these desirable things are possible only where vast sums of money are expended and where students come together from the ends of the earth. From simple lack of facilities the human mind can never in the small college range over the vast field which opens up before the investigator who does his work in the fully developed university. In other words, there is one glory of the small college and another glory of the large college. Neither should be disparaged in favor of the other. When one notices the meager courses of instruction provided in a great many small colleges, one is driven to the conclusion that these colleges need edification rather than multiplication. There are enough of them now till the existing ones can be strengthened. It is possible to spread learning out too thin."—*Exchange*.

A meeting of the trustees of the Carnegie Institution was held January 29, in the city of Washington. At this meeting Mr. Carnegie's deed of gift of \$10,000,000 was accepted and officers were elected. Dr. Daniel C. Gilman, for many years the president of the Johns Hopkins University, was elected the chief executive officer of the new institution. After thanking the trustees for so promptly accepting the gift and the trust imposed, Mr. Carnegie said:

"My first thought was to fulfill the expressed wish of Washington by establishing a univer-

sity here, but a study of the question forced me to the conclusion that under present conditions, were Washington still with us, his finely balanced judgment would decide that in our generation, at least, such use of wealth would not be the best.

"One of the most serious objections, and one which I could not overcome, was that another university might tend to weaken existing universities. My desire was to co-operate with all educational institutions and establish what would be a source of strength and not of weakness to them, and the idea of a Washington university or of anything of a memorial character therefore was abandoned."

"All who are planning to attend the next meeting of the Eastern Manual Training Association will be interested in the following facts taken from a letter recently received from Mr. C. B. Connelley, supervisor of manual training in Allegheny, Pa. At the time of this meeting there will be a great educational feast in Pittsburg. The Pennsylvania State Teachers' Association and the American Society for the Advancement of Science will convene during the same week as the Eastern Manual Training Association. The local committees of these organizations are working together and making large plans for the entertainment of their guests. One feature of these plans is a series of excursions through the great industrial establishments for which Pittsburg is noted. Nor will opportunity be lacking to visit manual-training schools, for Allegheny now has six, with eleven teachers, and Pittsburg has eight, including four for domestic science. The officers are planning a strong program, and are already able to announce Professor John Dewey, of the University of Chicago."—*Manual Training Magazine*.

"An Ideal School," by Superintendent Preston W. Search, is a book that should be read by every teacher. It is one of Appleton's "International Series," which is edited by Dr. William T. Harris. In his preface Dr. Harris says it is not likely that more than five per cent of new

experiments initiated in education will succeed in establishing themselves as of value to educational methods; but the five per cent of new experiments which do succeed may add, and do add, enough of value to compensate for the waste involved in the other ninety-five per cent of experiments.

Professor Search is a "practical idealist" and claims that the true education will at all times recognize the "individuality" of each pupil.

"Pittsburg has cause for honest pride and genuine joy over the fact that Andrew Carnegie has made it possible for her to have by far the best manual training and domestic arts institution in the world. Pittsburg has made phenomenal strides of late. Her park, with all that goes with it, her library, her new railway station, her new building blocks, and many other features place her among the cities of twice her size and wealth." *Journal of Education.*

The quarter-centennial celebration of Johns Hopkins University will be held in connection with the commemoration day exercises, February 22. At this time President Ira Remsen will be formally inaugurated. Dr. D. C. Gilman, president emeritus, will deliver the commemorative address.

On February 26 the centenary of the birth of Victor Hugo will be celebrated by the French people in an appropriate manner.

"No one will seriously deny that in order to accomplish the best results teachers must not only be paid sufficient salaries to free them from constant anxiety on the financial question, but those salaries must not be subject to possible diminution during the fiscal year."—*Catherine Goggin.*

"How important, then, it is that those who are chosen to teach should be masters of their own lives, and, by the permeation of human sunshine, should be able to establish in the school room that atmosphere which types the spirit of God."—*Professor Search.*

A meeting of the Department of Superintendents of the National Educational Association will be held in Chicago, February 25, 26 and 27, 1902. Secretary Irwin Shepard, Winona, Minnesota, will furnish programs on application.

"Fine art is the full and adequate embodiment of the idea in a form peculiarly appropriate to the idea."—*Henry T. Bailey, State Instructor of Drawing, Massachusetts.*

The council of Yale University has decided to substitute Memorial day for Washington's birthday as a holiday in all the departments.

Archbishop Ireland says: "The watchwords of the age are reason, education, liberty and the amelioration of the masses."

TALK TO HIGH SCHOOL PUPILS.*

BY CHARLES W. ELIOT, LL.D.,

President of Harvard College,

I may be excused, perhaps, if I address what I have to say chiefly to the pupils of this school. I want to congratulate them in the first place on coming into possession of such a beautiful building as this building, with choice of studies—one of the great, new privileges of American youth. I want to congratulate you also that this school is situated just where it is, near the Franklin Park and the Arnold Arboretum. Who do I count that considerable for you? Simply because I always feel that the acquisition of a love for nature, the acquisition of some thorough knowledge of some little bit or department of natural science, is one of the most desirable acquisitions for a human being in youth, and you have a vastly better opportunity for such acquisitions than pupils of most Boston schools. I trust that this school provides you with guides to such acquisitions. It can provide you with nothing better fitted to make your after-life happy.

But I remember that almost all the pupils of this school are going to stop their school life at an early age, perhaps at seventeen, or eighteen, or nineteen. That seems early to me, who am used to seeing young men pursuing what we call education until they are twenty-two or twenty-six years old, pursuing what we call education long after the period of the public high school. Now, can that be satisfactory—an education which stops at eighteen? Is not this a great denial of privilege to be forced to stop at eighteen and go out into the world to earn a livelihood? Can an education with such limits be anything but tantalizing? Can it lead to a life of enjoyment and full of power? That must be an interesting question, I think, for you pupils of this high school, for all pupils in high schools. You see a few of your mates going on to a prolonged education denied to the great majority of them. That is an inquiry which prompts a further inquiry. What is the real test of the satisfactoriness of any education? I see

in my own profession a considerable proportion of men who have been under what we call education till they are twenty-four or twenty-five years old, of whom I should say that their education at any rate had been profoundly unsatisfactory. Why must that judgment be pronounced? Because they cease to grow mentally, intellectually, too early. The continuance of growth seems to me to be the real test of the results of any education, short or long—the continuance of the growth of the individual. You know that you have been growing pretty fast lately in your bodies, but that growth is coming to an end. By the time you are twenty-five years old, or thirty years at the latest, you will have attained the maximum growth and strength of your bodies. Now, if your minds have that same experience, if your souls have that experience, your education will not have been satisfactory, no matter when it ended. The test of the satisfactoriness of an education is the growth afterwards through life, and life itself should be the best part of our education.

Now, how may we secure that growth of mind and soul which is the only satisfactory issue of training? I believe that that result must be secured by a constant attention to what is after all the very first principle in education in all teaching; namely, to be sure that, when you get an impression, you get also the means of expression, that also, when you make an observation all by yourself, that you tell somebody what you have seen. Now, that is almost the first instinct of a child. All your parents know that, when the little child has seen something that delights it, its very first instinct is to ask for your sympathy. The child wants to tell the father, or the mother, or the brother, or the sister what it has seen, or what it has done—profound lesson of the true education. If you acquire something by observation through the lesson of your teacher, make sure that you give that out. It will grow wonderfully in

*An address delivered at the dedication of the West Roxbury high school building.

the giving out, and the perfect impression on your mind will not be attained until you have given to it expression. Therefore, that education which is symbolized by the pumping into a bucket, or into a tub, or into a tank is the wrong kind of education. The educated person, no matter whether eighteen years old, or twenty-four years old, or twenty-six years old, should be not a pitcher, or tank, but a pump which both sucks and throws out.

The steam fire engine is the right symbol of an educated mind. With one motion of the piston it sucks, with the other it throws out; and that is the sort of a mind that works effectually upon itself, and on the community, helping the community throughout life. It is wonderful how small a mind originally, if it works through life in that way, can develop a great power.

An old lady stood looking for the first

time in her life at a steam fire engine pumping in the city of Portland, and she said, "Gracious, I never expected to see such a lot of water coming out of so small a place." Now, don't be discouraged if your mind seems to you at eighteen a small place. Go on absorbing all impressions, reading, listening to good speaking, going to a good theater, taking every means of absorbing into your minds, but also take every opportunity of giving out what you have taken in. So you will find as life goes on that your minds will steadily expand, gain power and become more and more useful at the very stage of life to be of use to your country. Then I hope you will all remember to pay the debt of gratitude you owe to the city of Boston for the education it gave you. The best return you can make to the city is to lead honorable, useful, upright lives.—*Journal of Education.*

FREE SCHOOL-BOOKS.

BY DR. ELISHA BENJAMIN ANDREWS,

President of the State University, Nebraska.

At its meeting on June 12, 1901, the Chicago School Board resolved by a vote of 13 to 3 to begin providing free text-books for all pupils in the first four grades of the public schools. One Peter Kill, a Chicago taxpayer, filed a bill in chancery to enjoin the board from carrying out this resolution, alleging that doing so would involve illegal expenditure of the city's school funds.

In its answer the board declares that the furnishing of free text-books is absolutely necessary to the maintenance of a thorough and efficient common-school system, such as the Illinois Constitution commands; that nearly every great city in America has been driven to furnish free text-books and is now furnishing them; that many of these cities began the practice without any law or statute explicitly authorizing it, justifying their action on the ground that free books are indispensable to school efficiency. The board further sets up that, as Chicago owns of school property more than twenty-six million dollars' worth and in

maintaining public schools spends yearly over eight million dollars, or over two hundred thousand a week, the certain loss of a week or more the first of every school year while poor pupils get books costs Chicago taxpayers every year from two hundred thousand dollars to three hundred thousand dollars, besides incalculably impairing the education of many children.

The case will probably go to the Supreme Court of Illinois, where the issue may be uncertain, but delay will not be long. Should the present law block action the public will demand an out-and-out free text-book statute, permitting Chicago to follow New York, Philadelphia, Boston and most of the other large American cities toward the goal of free text-books for schools. However, a rather strong American sentiment is still averse to this solution, so that the question of how public-school pupils should be provided with books is still up for study. It may be remarked that the term "books" in this discussion includes

all the educational supplies and appliances regularly needed and used in the work of teaching.

Let us not confuse this with any of the other school-book problems of our time. One of these relates to uniformity in school books. Shall the use of the same readers, arithmetics, geographies, et cetera be legally required throughout the state, a county, a city, a town? Another is : Shall a state or a city undertake to compose and manufacture for itself, as the state of California is now doing, any or all the books which its public-school children need, instead of purchasing these from regular publishers? Clearly any policy might be pursued regarding either of these matters without touching the terms, whether by purchase, rent or free loan, on which individual pupils could obtain school books.

Usage in the method of providing public school pupils with books varies a good deal among states and cities. The following legal data are from the report of the United States Commissioner of Education for 1897-8, Volume I., Chapter xix. It is believed that few, if any, important changes have been made since.

In Group I. school-boards *must* provide books (i. e., the use of them) free for all pupils, indigent or not. Delaware, Idaho, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New Jersey, Pennsylvania and Rhode Island form this group. In the District of Columbia books are free to all public-school pupils below the high schools.

In Group II. there is local option upon the question of furnishing free books for all pupils. Here are Colorado, Connecticut, Iowa, Kansas, Michigan, Minnesota, North and South Dakota, Vermont and Wisconsin.

In Group III. boards *must* provide books for all indigent pupils. This group consists of California, Indiana, Kentucky, Montana, Nevada, New Mexico, Virginia and Washington.

In Group IV. boards *may* provide for the indigent. Here come only Illinois and Missouri.

In Group V. boards *may* purchase books for sale to pupils. The states with

such a law are Ohio, South Carolina and West Virginia.

In New York state rural school-district boards may furnish books free to indigent pupils. Union school-district boards may do this for all pupils, but it is thought that out of about seven hundred such districts not over one hundred make such provision.

New York city supplies public-school pupils with books at public cost and has been doing so ever since 1806, the year when that city established free schools. Philadelphia has done the same since 1818, when its present system of free schools had its birth, thus introducing free books seventy-five years before Pennsylvania passed its compulsory free-book law. Many other prominent cities not in compulsory free-book territory have followed more or less completely those shining examples.

Yankton, South Dakota, *rents* school-books to its public-school pupils at a cost sufficient to cover the purchase and expense of handling. The advantages claimed for this method, which is said to work extremely well, are that "(1) books are purchased at wholesale prices, (2) the system is self-sustaining so far as the taxpayer is concerned, (3) the expense to the patron is merely nominal as compared with the private ownership question, (4) the best books in the market can be had without ground for opposition, (5) books may be changed, when old ones are worn out, without extra expense, (6) a practically unlimited supply of books can be furnished at no additional ultimate expense except that of interest on the money invested."

I believe that public school pupils throughout at least the first eight grades should have the use of school-books and other educational supplies free, the district, town, county or city owning said supplies and leading them to pupils without cost. This is the system set forth in the Massachusetts statute.

The argument for a policy of this kind is partly historical, partly moral or social, partly economic and partly pedagogical.

It is significant that those states and cities in the Union commonly considered the most advanced educationally have

adopted free books as indispensable to the proper working of a free-school system, and that wherever this has occurred the number of pupils in attendance has increased, the average duration of pupils' attendance has lengthened, a greater number and proportion of pupils continuing their studies clear up to the highest grades, and the whole efficiency of the schooling has improved. I have before me a great mass of favorable testimony from able and discriminating superintendents, who have had experience with the free system. All arguments contra are theoretical. Wherever free books have been tried, support of them is, I believe, practically unanimous.

Much advance has been made toward free books in places where the end is not reached. Without an exception the progressive communities not yet on the free-book platform have drifted into the habit of buying for their schools maps, charts, cyclopedias, dictionaries, gazetteers, school libraries and great stocks of supplementary books in various branches, not requiring a pupil to contribute a penny for any of these. Chicago has pursued this policy for years. Nor, I believe, has a single voice ever been raised from any quarter against public purchases of this kind, though they involve a complete concession of the free-book principle. By the logic of the standard counts against free books; that the plan is socialistic, that pupils value education in proportion to its cost to them, that it is demoralizing to accept something for nothing, and so on, pupils or parents should be made to pay out of their own pockets for all maps, charts, school libraries and the like, and even for blackboards, crayons and erasers. Why is not this required? Obviously for the good reason that the above pleas, so plausible theoretically, are found baseless in practice, while the gratuity method involves incalculable positive advantages. People see that the free-book plan is not socialistic, that pupils do not value schooling in proportion to its cost to themselves, and that it is not demoralizing to accept a freely offered public boon to be utilized for the public good. It does not appear why free books should

demoralize more than free teaching or free school housing.

There are important moral and social reasons for the free school-book scheme helping to explain why communities adopting free books never go back to the old way.

People who oppose free books as a general policy nearly always wish free books for the indigent. They wish them not alone out of charitable motives but because, as every teacher knows, it is in the average community absolutely impossible to carry out a school efficiently unless children from the poor families can get books without purchasing them. If this is not permitted, these pupils remain out of school or in school doing nothing. A considerable proportion of parents in most communities simply will not buy school books. If they are depended on to do so, the inevitable result is that their children do not participate in school advantages.

But while all superintendents and principals see that indigent children at least must be provided free, there is not one of them who does not in his heart deprecate the necessity for thus singling out the poor and calling attention to them. Deep and numerous moral evils arise from this practice. Nothing else so trains school children in falsehood and fraud; nothing else so destroys their honorable pride. Sensitive poor children are racked with pain carrying home urgent messages to their parents to purchase book and returning with refusals and plea of poverty. So powerful is the temptation to falsify that great numbers of parents declare themselves unable to purchase when with slight sacrifice they might do so. On the other hand, poor families of the better sort, too proud to plead poverty, will deny themselves the necessities of life in order to purchase, or, when this is wholly impossible, accept public books, begging that the fact may be concealed. The task of determining when a family is indigent is usually left to principals, which involves an additional evil. The difficulty of discrimination is so great that many principals give over all serious effort, passing out books, so long as they can get them, to all children who ask. Reckless pro-

vision for the indigent thus becomes more expensive than careful provision would be.

Distinctions among students based on anything but scholarship are an evil.

If any pupils are to have books free, all should be so provided, that there may be in school no difference between the children of the poorer and those of the richer families. When in 1806 New York city established free schools and adopted free books for the pupils therein, one of the reasons for the latter enactment was "to guard against invidious distinctions among pupils on account of indigence." No children using their books free while others purchase are regarded in school as quite the peers of those others. To supply the poorest families with books and not to supply the well-to-do thus creates an insufferable class distinction in the schools.

On the contrary, where all have the free use of books there is no social schism but, in this matter at least, all stand upon an equality. This procedure promotes dignity, honesty and sympathy of class with class in the same way as does the absolutely free education of the Roman Catholic clergy and that of the cadets in the United States Military Academy and in the United States Naval Academy. The policy in these instances breeds no spirit of communism but it most usefully minimizes class and social cleavage.

Neither from the above arguments for gratuitous provision nor from these conspicuous examples of its exercise does it follow, as is sometimes thoughtlessly alleged, that the community, like Mehemet Ali on opening the first public schools in Egypt, should give school children their home-housing, clothing and food. Were it necessary for children to be schooled remote from home, those things might need to come from the state, but fortunately we are not called on to deal with such a condition. Those things are, as a matter of fact, always provided by parents, friends, or charitable organizations. The lack of them is never to any extent a clog upon school work. Moreover, those things are necessary to the life of the pupil whether in school or out, for the subsistence of a human being as

such, whereas books, like school houses, benches and heating, are required for the quite special purpose of rendering efficacious the educational work which, all agree, is vital to the public weal. Free books are not a charity any more than free schooling is.

Many will be puzzled by the assertion that a city in the habit of furnishing indigent pupils with books could supply these to all pupils, thereby not only not increasing but actually lightening taxpayers' burdens. Yet such may easily be the case. Boston, like so many cities now, formerly supplied books only for the indigent. When the new system of free books had been in use there two years, all were surprised to find the city actually spending less money in providing all the pupils than it had been spending upon the indigent alone. It is easy to understand this. When public ownership is made general, the loaning out, debiting, returning and crediting of books becomes systematic and accurate, reducing the loss of volumes to a minimum. The care which pupils, well trained at home, bestow upon the books intrusted to their keeping becomes an example to all, working against mutilation and destruction.

But, whatever the effect upon taxpayers, any community providing school books free immensely saves, as a community, in the cost of books. Books privately purchased are usually of no account when pupils are promoted, practically never so unless there are younger members of the family to use them. Grave loss occurs when families move from place to place, as factory operatives in particular so commonly do. Many of these nomadic families are very large, rendering the hardship in question doubly great. Further, under the individual purchase system vast numbers of books are not used up, but wasted. Some misuse of books doubtless occurs under public ownership, but it is much less. This system being made general, the best families participating like the rest, parents and pupils usually recognize the propriety of treating with care what is lent them by the board, and the justice of paying therefor in case anything is destroyed while in their hands.

Laws requiring uniformity in school

books over whole communities and forbidding change save at considerable intervals do not reduce families' expenses for school books so much as was hoped when such laws began to be enacted. The uniformity tract is never larger than a state (and this, from a pedagogical point of view, is much too large). But families moving from place to place very often cross state lines. Whatever economy uniformity laws work, this advantage is certainly offset by the further pedagogical infelicity connected with them, that many a poor book gets fastened upon the schools and cannot be changed until the legal period has elapsed. Public ownership works particular saving in that it makes possible double and triple sets of readers and of other books for the same classes. Parents cannot be asked to bear the expense of procuring several books in the same study. Hence, as above noticed, most school-boards, even when not furnishing free books in general, provide free supplementary books to improve the instruction in reading, singing, geography and other branches. In addition to all this is the consideration that a board of education can purchase at minimum cost whereas individuals must pay regular retail rates.

The points just noted in effect meet the objection urged by patrons of private schools against free books in public schools—that the introduction of these in a city draws pupils from private into the public schools, a movement to be arrested only by the costly enterprise of placing the private schools also on the free-book foundation. But if the supporters of the private schools in any community will, joining hands, adopt for their schools the free-book method, they will, as a body, save money besides immensely improving their schools.

After all, the chief motive favoring free books for public-school pupils is the pedagogical one. That free books are indispensable to anything like an ideal execution of the free-school theory is not open to doubt. In most states, as in Illinois, school authorities are "required to provide a thorough and efficient system of free schools whereby all the children of the state may receive a good common-school education." They cannot properly

perform this duty on any plan of individual purchase. Precisely this is the contention of the Chicago Board, that though Illinois law does not in terms authorize free books it in effect does so in commanding "a thorough and efficient system of free schools."

Only by resort to the gratuity system can classes be promptly organized at the beginning of sessions. Do our best, the opening of a session sees more or less delay in waiting for pupils who could not take up the work with their classes at the proper time. If school-books are not free, this difficulty becomes appalling. It is not at all uncommon for a pupil to be kept from school many weeks for this reason. One in fact often witnesses the ridiculous anomaly of children hustled into school by truant officers only to sit there and idle away their time for lack of books. That schools thus cursed in any sense succeed is the miracle wrought by indefatigable teachers.

Again, without free books classification cannot be just or complete. Promotions and reductions are certain not to occur as deserved. If a pupil has begun a session in a given grade and purchased the proper books, no principal would wish and few would dare, to "demote" him to the next lower grade, even if the pupil's interests and those of his grade demanded this ever so imperatively. The same difficulty hinders due promotions. Ascending a grade, the pupil must of course have new books. Even well-to-do and sympathetic parents complain at such a demand.

Something has been made of the sanitary argument against free books, there being, it is held, danger of school pupils contracting diseases if books pass from hand to hand. This consideration, even more valid against the whole system of circulating libraries, ought not to be ignored. On the other hand, it is usually exaggerated, and the danger in question, such as it is, can in the main be obviated. A pupil's books for a given session will not pass hands more by the free system than by the other. Then, to be sure, the volumes, if in suitable repair, may be passed to another pupil. Many of these will be found to be perfectly clean and

hygienic. The rest can easily be disinfected before redistribution.

It is objected to the free school-book practice that, as each child is by this plan obliged to relinquish his books after he has done with them, children fail to set up while in school that loving personal relation with good books which is so desirable to encourage. But the free-book order does not prevent pupils from purchasing school-books of their own; it simply does not require this. Pupils able to purchase are welcome to do so. But really the class of books in question, the stock and standard books used in the grades, the kind which the non-indigent

are expected to purchase, are mostly not the sort of books with which pupils can be expected to fall in love. An eighth-grade boy cherishing his old primer or his first geography or arithmetic would not on this account deserve to be thought promising as a lover of good literature. Nearly all the permanently valuable works which pupils see in schools not having free books are "supplementary," which no school boards think of forcing pupils to buy. Teachers recommend many books of this class for pupils' purchase and pupils actually purchase many such.—*The Cosmopolitan.*

THE ELEMENT OF INSPIRATION IN THE SCHOOLS.

BY PRESIDENT ANDREW S. DRAPER, LL.D.,

University of Illinois.

The growth of the American school system supplies material for a remarkable, a fascinating, even a patriotic and glorious story. No other great people ever gained such splendid educational conceptions, for the masses stand for unlimited educational opportunity to every son and daughter of the people. No other people ever thought of providing schools for every rod of such a wide and sparsely settled territory as ours; no other people ever attempted to provide the best free schools of all grades for all classes in such cities as ours. No other great nation in the world has builded an educational system upon such plans—so flexible, so adaptable to the national ends, so expressive and promotive of the national life. And it has not been done by a monarchy, or by a ministry through the use of dictatorial powers, but by the millions of a great, liberal people, moved by the highest purposes, acting through primary meetings, and then exercising sovereign powers through representatives and responsible assemblages.

It is not speaking unadvisedly to attribute this splendid advance to the last two generations of men and the last half

century of time, for it is the product of a people who had not been gathered and of conditions which had not arisen before that time. In that time a new nation has been compounded in the Western World, with new measures of freedom—physical freedom, social freedom, political freedom, intellectual freedom, religious freedom, and industrial freedom. Happily too this nation has come to recognize the need of social and political organization and of the exercise of the common power. And yet more happily as the common power has grown, the determination that it shall be used only for the common good has grown also. It has struck the high water mark of democratic government in the recent use of its power for other than its own good, for the freedom of other people, and for the good of all mankind.

This common power has never been used to control the thinking or the doing of any respectable citizen, but to protect him and afford him opportunities. It has never been used to bully other peoples, but to encourage them. It has stood for free discussion; it has helped genius in the production of devices for saving labor; it has given science its chance;

it has given its best offices to the aid of agriculture and mining and manufacturing until industries have gained it more respect and invested it with more commanding influence in the world than a mere military or naval arm could hope to do.

One of the creations of this common power is our unique system of popular education. American schools have from first to last reflected American economic and political conditions. It may well be doubted whether the self-contained belief of the teaching fraternity that the schools determine the courses of peoples is justified. They are implements which break out the road; they are lights which light the paths, but they are the instruments more than they are the creators of civilizations. Civilizations and their resulting institutions are the products of the Almighty power working through the souls of men.

The schools have advanced with the growth of the nation and the progress of civilization. They are much better housed; they do much more work; and they are more scientifically taught than in primitive days; but it was easier for the early schools to meet the small demands of their day than for us to foresee the tendencies of these seething times and meet the claims of the multitudes who are waiting upon us.

Enthusiasm is the vital element in the work of the school. Teaching depends upon the interest of the pupil. The interest of the pupil depends upon the adaptation of the subject and the spirit of the teacher. The trouble with the greater number of pupils in larger schools is that they never gain enthusiasm over anything. They live just ordinary, dead-level lives because not touched with the vital spark which would transmit energy to their intellectual and moral machinery.

Beyond all question we are trying to do too many things. The quantity of work a child does under duress is not so important as that he shall do something because he likes to do it. Before he can like to do it, it must be something which he can do, which in time he can master completely. Growth depends upon the power to do. The power to do depends upon doing.

The early teacher could choose work

suited to particular pupils, and was free to do it because he was a law unto himself. And so teacher and pupil worked together upon subjects which they could master and which they therefore enjoyed. They accomplished things and in the doing they gained the strength and the ambition to do larger things.

Aside from the matter of close touch with the pupil there is undoubtedly a loss to the spirit of the school because of the grading of pupils and the segregation of classes. The mixing of pupils in the one-room school did stir thought and generate ambition. Unceasing preparation for the grade above, rather than for life, is not without its disadvantages. The practical elimination of special exercises, with the declamation and recitation, is a distinct loss. The professionalization of the schools, the doctrine that they must be given over to experts, tends to separate them from the people. Parents do not understand very much their children are doing; they are impliedly told that it is beyond them, and that they cannot expect to understand; this trend in the work of the schools is putting a very severe strain upon a very important cord.

We may well stop and ask whether we are accentuating form at the expense of substance. I believe that the literature in common use in the schools makes for culture at the expense of strength. I am for culture, but not at the cost of manliness, of independence, and of power.

I opened a school reader the other day, and the first verse my eye lit upon commenced with the line, "Children are what their mothers are." It was pretty, but not true. How do you suppose such stuff as that appeals to boys? They do not want to be as their mothers are. Ordinarily they love their mothers more than they care to talk about, but if they are what their mothers are their associates poke them in the ribs and call them feminine and uncomplimentary names.

No doubt girls with no teacher but a man are entitled to sympathy; happily there are few of them. But in the distribution let us not forget the boys whose only teacher is a woman. And let the lion's share of pity go to either boys or girls who are subject to either a fussy woman or an effeminate man.

No reflections upon the conditions

which prevail in the American schools have been intended. They are subject to outside circumstances; they reflect the age in which they are. The teachers are more conscientious than any other class in the community; on the whole they are much better prepared than the teachers were who went before them. What has been done in organization has been compelled by numbers, and what had been undertaken in work has only been in response to popular impulses. What has been done has saved the school system from chaos, but it has gone far to discourage and neutralize the influences which inspire.

Teachers, the great mission of your station is to *inspire* boys and girls. If that is done it matters not so much what is left undone. You are the representatives of the greatest civilization the world has ever known, charged with the responsibility of training men and women who can realize its cost and its worth, who can enter into its purposes, who can still further enrich its life and still further extend its outposts.

It is to be assumed that you are sane enough to know that freedom is not a license, and that you have wit enough to do things upon your own motion without violating the principles or defying the policies which are imperative to the integrity of our system of popular education. My word to you is that you shall not hesitate to exercise your inborn intellectual freedom; that you shall not let rules and lectures and books and papers and devices and educational subtleties confound and take out of you any originality you ever possessed, and so make your work in the schools insipid.

Tell the boys and the girls that no one can hope to be of any consequence in the world who will not work early and late and be patient; and also that if he will do that he cannot fail.

Remember that development is seldom foreseen, and that it does not often come along expected lines. Encourage the activities, physical, mental and moral, and give the unexpected a chance.

Be careful about standards of value and of excellence. Latin and Greek are disciplinary and culturing studies, but so also are the accomplishments of science and the operating of railroads and the

building of tunnels through mountains and under rivers and great cities.

It cannot be said too often that it does not make so much difference what one does so long as he makes some contribution to the productivity of the world. And one is liable to make quite as substantial a contribution, and gain quite as profitable a return, in cash and in culture, in the industrial as in the classical world, and in the field of applied as in that of pure science.

Encourage life in the open air, not for physical more than for mental and moral health. Let the schools smell of the ground as often as possible; it will help them to keep sane and resist the doctrine. Stand by field sports, even those which involve hurts. Our young people do not have to struggle any too much or assume any too many risks. There is more training for the real demands of American citizenship through the rush line of a 'varsity football team on one cool October afternoon than in some 'varsity class rooms in a whole semester.

Illustrate and enforce the claims of public service. We are beginning to learn, what we have never seemed to realize before, that our public life must sustain assaults, and that government is more a burden than a pastime. Tell pupils about this. Talk quite as much of the responsibilities and duties as of the rights and privileges of citizenship. Let them know something of what men have suffered to establish, order and create opportunities for boys and girls.

Regard the higher learning. Nothing else can break out the roads. Nothing else can lift the schools to higher planes and yet better work. But do not let the conceptions of other generations determine conclusively in what fields the higher learning shall advance. Encourage research, whether capable of application or not, in all fields, but insist that such work as is set in motion in the elementary and secondary schools shall have some relations to American life.

The Divine Power creates and directs civilization. Schools are the instruments of civilization. The activity and the accomplishments of pupils spring from inspiration. If the teacher would be of real service to pupils he must inspire them. If he would enrich their lives he

must have a life of his own with riches in it. He must know about the intellectual and spiritual and industrial evolution of his country and his age; he must think logically; he must stand for what he thinks and feels, steadily and heroically.

If he can draw out of the great reservoir of world-experience, if he can believe that there is a divine law operating in the world advance, if he can take hold of youth and fire souls with desires, he will

generate natural, cheerful, buoyant, courageous life. The spelling will in time be correct enough, the problems demonstrated with exactness enough, knowledge of things will accumulate, respect for hand and mind labor will enlarge, powers will strengthen, courage will gather, and a greater number of healthful and ambitious spirits will push on the higher interests and enrich the nobler life of the world.—*American Education*.

CREATIVE MANUAL TRAINING.*

BY GRANT BEEBE,

Medill High School, Chicago.

Educators are generally agreed that one of the prime objects of education is to fit the pupil for independent individual action. As Professor Wiliston has said, the demand today is for men of originality and energy who can do things that have never been done before; who can bridge over the gulf that has so long existed between thinking and doing. Herein lies the great strength of manual training, as it combines the thought and the action, resulting in a real object which, with greater or less success, embodies and presents to all who see it the ideas of the man who made it.

This object must of necessity be a representation, more or less perfect, of the mental image that existed in the mind of its creator. The progress of such an image from its initial vagueness to clearness and definiteness is dependent upon the mode of its final expression. The least perfect method is by the written or spoken word, for all mere descriptions must be more or less vague. One common expression, "a word-picture," used in connection with any unusually good piece of writing or speaking, is a recognition of this truth. Next in order of completeness comes a drawing or a series of drawings representing the object; and lastly the actual object constructed from the necessary materials

and giving the hitherto unreal an actual existence.

Froebel, the founder of our kindergarten system, thus expresses this psychological fact: "The educator must take the external internal and the internal external." That is, he must so elucidate and make clear the essential facts of the subject in hand that they enter into and become part of the very being of the pupil. This, however, is but half the task of the true educator, for he must then by some means or other enable the pupil to make this internal external; that is, he must give the pupil the power to again give out what he has taken in, and enriched with his own personality. The individual must have ideas to express, but, having them, they are worthless unless he can make them useful to, and understood by, others.

I wish to call attention to the order here stated; the reception, or taking in, *must come first*. To do creative work of any character, the individual must have in his mind the content, the necessary conceptions which are involved in the thing he wishes to do. A consideration of this principle will, I think, explain the failure of many of our attempts to secure self-expression from our pupils. They have taken in so little from their instruction and from the world around

*Abstract of a paper published in the *Manual Training Magazine*.

them that, were they possessed of the most perfect system of expression, the results would be of no importance. They may have a hazy idea that they want to accomplish a certain result, but they have no conception of the details that are necessary to the desired construction; or, having them, they do not know how to combine them properly.

We ask a twelve or thirteen-year-old boy who has mastered neither his tools nor the principles of construction to *invent* something. We might as well order him to be six feet high; for what is invention? Invention is the power to modify and recombine our images and ideas. The true artist sees elements of beauty in many landscapes, and by combining them he paints an ideal landscape that is more beautiful than any that he has seen. The inventor pictures a balloon impelled by electricity and guided by the hand of man. He endeavors to adjust the forces and use the materials with which he is familiar to accomplish his end.

We may now make a deduction as to the necessary elements in creative work; first, the necessity for the invention, or the desire for the new creation, must exist in the mind of the pupil; secondly, he must have the knowledge and skill necessary to realize his conception. No scheme of instruction will or can be educational—that is, of value in developing definite concepts and giving power of expression—that does not make him familiar with the principles, tools and materials that he is to use.

It is the misfortune of manual training that it is often directed by people who know nothing of the principles of construction, and therefore cannot impart them to their pupils. I have seen a man who did not know how to make a box trying to teach a pupil how to make a telephone, and a woman who could not make a sandpaper block endeavoring to teach the construction of hexagonal tabourettes. I once visited a shop where a pupil was constructing a chair under the supervision of the teacher. The legs were made of pieces $1\frac{1}{2}$ inches square, and the seat was made of a piece of pine $\frac{3}{4}$ of an inch thick, without rails or braces of any kind. The inevitable result was

that the seat broke through the middle as soon as the builder sat upon it, and he flung his creation aside in disgust.

Again, I visited an exhibition of constructive work where I saw a model, so called, of a spinning wheel. This was so constructed that the connecting rod struck the frame, and the wheel would not revolve. Such an object as this is absolutely worthless. Except for a little manual dexterity in shaping the different parts, it taught nothing. More than this, the basic principle of the machine was not present, and the chief good of such constructions, the combination of parts to produce a certain result, was lost to the pupil. Even supposing that this object had been perfectly constructed, it would not have been as good educationally as some object of simpler construction more intimately connected with the pupil's daily life or experience. A knowledge of spinning wheels is not essential in the twentieth century, and certainly it is not knowledge to gain which the pupil and teacher should spend valuable time.

Manual training does not aim to prepare students to be carpenters, engineers, or machinists, but it should aim to give a general training in the principles that are common to the various branches of mechanical work, so that, should choice or necessity compel the pupil to pursue these or allied occupations, he will be prepared to achieve an advanced position.

This may be called a utilitarian view, but I believe it is an injury to the pupil to give him expensive tastes, if you do not increase his earning capacity. The duty of the school, and particularly the public school, is to train for citizenship. I believe that no man can be a desirable, self-respecting member of the community who is not self-supporting.

There seems to be a general impression that there is an essential difference between the kind of training that will enable a pupil to do creative work and that which will enable him to earn his living. I believe that there is no such difference, and that the kind of training which enables its possessor to support himself leads to the creative activity of which I have spoken. If a pupil is to create, he must master his tools and ma-

terials, and this mastery comes by instruction, by practice, and by the constant repetition of the same principles and processes in varied forms.

Every man in his progress through life is accompanied by two shadows; the one before him—the ideal he would attain; the one behind him—this same ideal, transformed through action. There are ideals in both processes and products, and it is the duty of the school to see that the pupil obtains them. The pupil must have a good method, and he can best obtain it by a careful observation of his teacher. It is necessary, not only that the thing be done, but that it be done efficiently, if the individual is to create effectively.

In his "New Methods in Education" Professor Tadd pays tribute to the imitative method, which he affects to ignore, by suggesting that the work in carving be hung on the walls of the shop that the pupils may obtain hints for new designs. This matter of the proper environment is, I believe, very important. The pupil should have around him as many examples as possible of the kind of work that he expects to produce.

I recently visited the boyhood home of a successful architect, a man who is noted for the beauty and originality of his designs. I found the house filled with pictures of beautiful buildings and objects of art. From his childhood this man has been accustomed to seeing these things, and they have become such a part of his nature that now, when the arch or the capital is required, the design flows from his pencil without apparent effort.

The first step toward creation, then, is receptive; the second, the combination of the ideas already received; and the third, the outward expression of the new combination.

As a practical suggestion for the second step I suggest the modification of existing models. In my opinion, this is as far as most grammar school pupils, who begin work in the seventh grade, should go. I have seen very few pupils who are capable of originating a practical design, and by "practical" I mean within their constructive capacity. The best means to bring out this feature of the pupil's idea is to have him present

a working drawing of the object he desires to make. This will make him formulate his ideas, test his power to apply what he knows, and enable him to use his mechanical drawing.

The necessity of mechanical drawing has been questioned by some, but I believe this is because it is not properly understood as a means of expression. True, it is conventional, and no one ever saw, or ever will see, an object as shown on a projection drawing, but it is nevertheless better suited to all kinds of constructive work than any perspective or artistic drawing. Not only this, but it has true educational value in the training of the imagination. Actually to conceive the form of an object from its projections involves a higher degree of imaginative power than is required by any other form of representation.

If the pupil can submit a practical design, I should by all means let him make it, but I should insist that the construction be good. A bookcase through whose joints the light can be seen, or a table that will not bear weight, is not educational in the best sense. Perfection is not to be expected, but careless and slovenly work must not be tolerated for the sake of originality. It is a good thing to be able to say that a piece of work is original, but it is sad indeed when that is the only good thing that can be said about it.

More than this, the pupil who is allowed to do poor work does not obtain that appreciation of the ability required to do good mechanical work that is necessary, if he is to have a proper respect for workmen in general. The defect in our industrial system is not that we have too much machinery, but that we treat men like machines. It has been claimed that we need more handwork that the product may have a more human interest. What we need is a more intelligent appreciation of the ability required by the worker. There is a general impression that the man who works with his head must have more ability than the man who works with his hands, whereas it is a difference in kind only. The teachers of manual training can do much to eliminate this false idea, if they make their pupils realize the care and

ability needed for all good handwork. I believe that such a realization is more important than the carving of imaginary dragons or the drawing of impossible flowers.

In regard to decoration as a means of creative work, I think much of it can well be omitted, as it is neither artistic nor educational. In the construction of articles of furniture, for example, the first requisite is strength; next come the details of construction—the right joints used in the proper places, the proper proportion of parts; and lastly the carving or decoration. In many cases this mars the beauty of line and contour.

I am heartily in sympathy with the belief that the decoration of articles not of his own construction has a bad moral effect on the pupil, and it was a matter of surprise to me that Mr. Tadd in his book, previously quoted, advises that chairs be purchased ready doweled together, and that then the pupils take them apart and carve them. I cannot believe that this method will secure good creative work.

I do not think that pupils of grammar-school age can spend much time to advantage in original design; a little is desirable, but, generally speaking, I believe the pupil will be more benefited by studying the designs of others. It is true that this so-called original work is pop-

ular, and that the pupils like to do it, but I do not think that this is a sufficient reason for permitting it.

Children like to do many things that are known to be bad for them, and it is the function of the teacher to *direct* activity. Pupils, like other moving bodies, are likely to proceed along the lines of least resistance, but these are not necessarily the best for them to pursue. I recognize, as every teacher must, the value of self-activity, but I believe it should be directed by a wise teacher along proper lines, and that, so guided, it will produce more genuine, valuable, creative work than when the pupil is allowed full freedom. Unless this is done, the pupil will not gain the strength of will and perseverance that are required by creative work.

I believe that, whatever the system of instruction and whatever the future of the pupil, the unpleasant must be faced at last, and that the child has gained most who stands ready to face it and put forth all his strength for the realization of his ideal.

If he does so and brings a difficult or unpleasant task to a successful completion, we may be sure that, whatever work the future has in store for him, he will accomplish it, not with the halting uncertainty of the amateur, but with the efficient execution that marks the master.

THE RELATION OF THE HOME TO THE PREPARATORY SCHOOL.

BY THE REV. ENDICOTT PEABODY, A.M.,

Principal of Groton School.

The immediate question is what the school has a right to expect from the home. In the first place, the attitude toward the school should not be one of indifference. This is the position which is taken by some parents, "We have other things to do, and we pay our teachers, or our taxes, and they ought to secure a proper education for the children." Neither should it be an attitude of hostile criticism. Changes are opposed because the old methods under which we were educated seem to us to have turned out a pretty good set of men, or else there is a demand for change because the studies required are not interesting to the youthful mind (in this respect Mr. Dooley may be very nearly correct when he says that "It does not matter what you give a boy to read so long as he hates it"), or else that they are not likely to be available for the business or profession which lies ahead.

The school has a right, I think, to claim the intelligent and sympathetic co-operation of the parents. It is in the home that the quality of the *intellectual* life is largely determined. If the parents are reading worthy books and talking intelligently about the subjects of the day and devoting some time to reading aloud to their children, there is likely to come out from their home an activity of mind and a kind of intelligence which will show themselves in the scholarship of the children. At all events, there should be banished from every home in this land the so-called yellow journals and the society papers and the realistic books which are handed about by news-venders and which seem to be thoughtlessly taken up by parents whose conscientiousness is satisfied so long as they do not actually put such literature into the hands of their children. But all this stuff percolates through the minds of the parents into the minds of the younger generation, and the political ideas and the social aspirations of the older people become the property of the children, who, at an astonishingly

early age, begin to discuss the condition of the stock market and the quality of the fare set before them, and the foibles and vices of the neighbors, if these things form the chief interest of those who preside over the home.

The school may rightly look to the home for the foundation of the discipline which is necessary for community life. I do not refer now to military discipline, nor to an arbitrary method which is too often the only kind of discipline that parents recognize. An American mother has been represented as sitting on the piazza of a summer hotel and refusing permission to her child who wishes to go to the beach. "But can't I go, mother? Please let me go. Why can't I go?" "Because," the mother replies; "and when I say *because* I mean because." There is often found a thing which calls itself discipline where the parents indulge their children the greater part of the time, and then when something arises which brings personal annoyance, coming down upon the children with a violence entirely out of proportion to the offense.

That house only is well-ordered in which the mutual understanding is so well established that the children are wont to carry out not only the commands but the wishes of the parents; where not only the great principles of life are enforced, but the small duties are conscientiously regarded.

The schools have a right to ask that in the homes the children shall be established in right *habit* of living. A lack of discipline means only a general slackness and consequent discomfort in the family, which brings with it other evils.

Parents today frequently start in with a distrust of their boys; they are of the opinion that it is better to allow them to smoke than that the lads should indulge in this habit in secret; but a boy who smokes is aware that the community generally disapproves of it and consequently of him, and he is inclined to justify the reputation which he bears. Smoking may

not always be harmful in its effect upon the health, but it is almost sure to injure character. The next step after the cigarette is the public pool-room; then the saloon, followed by the low theater, or the respectable theater with the low play,—which is perhaps worse,—and then probably increasing moral evil follows.

The offset to all this is, first of all, athletic sports. There is very little opportunity for athletics in our cities, and the reason is that parents do not know the moral benefit which accrues to young people from the general introduction of these pursuits. If they did know it they would certainly secure recreation grounds in large numbers in the cities, a thing which could be done tomorrow if the eyes of the fathers were opened.

Secondly, parents should live with their children, and learn to understand them and to sympathize with them in all their young experiences.

The relationship between children and parents has undergone a radical change in the last half century. We are, in the family, as in other relations, on an easier and more natural basis. No doubt the change is an improvement in many ways. We understand each other better; there is more real companionship between young and old; but there may be also a great loss attending the new development. There is abroad a general theory that children are to be persuaded rather than directed, and so the virtue of obedience, no longer emphasized, is growing weak. With it also goes a tendency to avoid all unreality and to appear to the young that which one really is. And that is good, too, if one is trying to live toward a high ideal. But it will require a finer and a higher standard of life than under the old *regime*, for children are naturally hero-worshippers, and if you are strong you may easily lead them to higher pastures; but if you are childish, and without self-control, or if you are self-indulgent and mean, they will first of all follow you, and then they will criticise and lose their respect for you, and affection without respect is nothing. But we must remember that it is not only, not chiefly,—one may say,—the direct influence that we exert that is most effective. It is the indirect influence that is most telling,—

that which one feels to be the atmosphere of the home, that which surrounds one, and is continually operative. And what are some of the characteristics of this atmosphere?

The poet Wordsworth, writing to his fellow-countrymen at the beginning of this century, declared:—

"The world is too much with us; late and soon,
Getting and spending, we lay waste our
powers."

Worldiness!—what does it mean? Laboring for *material* things, and especially this,—accepting for our standards the standards of the great majority of people; does it not? That should not be in our homes. Surely the home should be not only a harbor where the ships lie sheltered from the billows and the storms of the sea, it should also be a place where whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report are laid hold of and cherished. It should surely not be the aim of parents that their children should be attractive to others, that they should be popular wherever they may be. And yet this is too evidently the aim that many of us have, and the fact that a girl is a success as she is launched into society, or a boy is widely popular at his college, brings happiness and satisfaction to many a parent's mind, when it ought to mean anxiety and searching of heart. For social success too often brings with it a selfishness and vanity and a shallowness which ruin character; and as for popularity at college, if you encourage him to it, your son will forfeit principle and conviction, and sell his very soul to get into a fashionable club.

If parents would only keep the old aspirations which they had when their child first came to them from God, when it seemed such a solemn responsibility to have a human soul intrusted to their care; but the fear of losing it concentrated their mind upon its physical well-being, and, gradually, their chief aim came to keep the child in good health. As if life, mere life, was valuable in itself; as if all the aspirations for goodness, all the visions of God which came in those early years might be safely disregarded

if only the child became a healthy animal. This little one, made in the image of God, trailing clouds of glory as it came from him, allowed to lose all the innocence of soul, and no great power brought in to replace it. "Ah, if only a child has religious parents," a young man said to me the other day, "he has a good start in life. For I am sure," he said, "that unless a child is helped to realize the personality of God in the first few years of his life, he can hardly ever hope to get it." And these children are all ready for religion, my friends. They recognize what you mean when you speak of God. When the little girl who had been born blind and deaf and dumb, was told by Phillips Brooks of God, she said, "I knew something about him before but I never knew his name." With all this possibility for God, with all this eagerness for purity and for the highest character, which are latent in their souls, how much do they hear of God in their homes? The child's prayer is taught them, and that is good; but it becomes mechanical if there are no further petitions added as their needs grow. In times of sorrow, when sickness or death comes into the home circle, they see you turn to him, and the effect upon their mind was unconsciously described by a boy who told me when he was asked if certain men were fine characters, "Oh, yes; they are very good; they are religious, very religious—they have to be, for they are in danger all the time." God—a being to whom to repeat a short prayer before one goes to sleep; God—the One who is to be propitiated if one is in danger of death; God—a name which is frequently on men's lips by way of oath—are not these often the chief ways in which a child learns of him? You clothe and feed them carefully; you shelter them from illness; you give them, in a pecuniary way, what you call a good start in the world. And is not that what Christ said a parent would not do? If his son ask bread, will he give him a stone? If he ask a fish, will he give him a serpent? The only way out of it is by the simple return to Christ.

Advice, worldly counsel, is important; but the most valuable thing a parent can do for a child is to pray for him—to pray

for him in his chamber; pray with him in his home. I know that households are not arranged with a view to family prayers. It is an old-fashioned custom, we may think, which has naturally fallen into disuse. It would be an odd thing, perhaps, for the father to be seen reading a portion of the Scriptures. But, my friends, it is not inconvenient to arrange the households for purposes of amusement, and if a man hopes to have power with his children, he must certainly find moral courage enough to get down upon his knees and be their leader in prayer as in all other things. It is becoming uncommon, too, for families to join in common prayer in church. Sunday has become a day of physical rest for the workers, and it is fast becoming a seventh day of pleasure for those who are idle. The argument is brought forward that one should not go to church if one does not feel particularly inclined thereto; as if one were at liberty to neglect the spiritual life; as if one were free to choose duty or self indulgence; as if you could expect to be pure and unselfish, and true, unless you keep near the Source of purity and truth.

Again, many have handed over all spiritual instruction to the Sunday-school teacher. Theological knowledge is confined, with not a few persons today, to a denial of the personality of the devil; a refusal to believe in hell; a sort of misty idea that since we have learned more about other peoples of the earth, their religions have been found to be the same, possibly a bit inferior to Christ's, and that God being the Father of us all will make allowance and see that everything comes right at last. But there is a theology to be taught your children which you yourself can get from the teaching of the life of Christ; and be sure that no one like a mother or a father can teach a child as effectively of him. If you would win the full sympathy and confidence of your children, you must share with them these deepest things of life.

My lot is cast among young people, and I know from personal experience that you find the readiest response to an appeal to a boy's highest nature. He understands you most naturally when

you speak to him of Christ when he has been brought up in a religious home.

The ways to it—some portion of the ways—are through the habit of recognizing God in the family life—in the earliest years to speak of him as time goes on, to pray with your children in private, and in public to teach them yourselves of God.

These are the definite ways; with them also must go the deep motive in your souls, the motive of Jesus as shown also in the prayer, "For their sakes I sanctify myself." Why? "That they may be sanctified through the truth." There is the source of the unconscious influence of which I spoke first—the simple, single-hearted desire and intention to cultivate the inner life, to try to learn the truth, to be good in order that these little ones may be led to be sanctified. The method is Christ's own method—taking a few and loving them and helping them, and so gradually working through them upon the world outside. The effect is unlimited that parents may have upon this generation through their children, and through them, too, upon generations who are yet unborn.

You remember how, in one of the songs of Tennyson's "Princess," when home they brought her warrior dead, the woman was possessed, was overwhelmed, by a hard and stony grief. Nothing availed to arouse her till at last

"Rose a nurse of ninety years,
Set his child upon her knee;
Like summer tempest came her tears,
'Sweet my child, I live for thee.'"

So one can understand the appeals that are made to arouse a man to a higher life for the sake of his own soul may pass unheeded; but when the call comes to him to save his children, not from physical suffering, not from gross ignorance, but from materialism and self-indulgence, then I can fancy its seeming to be a call from the heart of God himself.

I know men who are anxious about their sons today, and how do they try to set about helping them? They try to secure for them first-rate tutors, to influence their children's characters. It is like an admiral allowing his lower officers to fight his ship and command his

men. The responsibility for their sons' lives lies with these men. They cannot shift it by paying out hundreds or thousands of dollars. It is beginning the wrong way. They should begin with themselves. If a man would know the love of God, let him be a true father. Give to the children some fair share of your time, your thoughts, your prayers. Give them yourself, and let that self be earnest and single in its intention.

The culmination of love is to give your children for the highest work for which they are capable. Not that they should become successful business men or prominent lawyers, but that they should adopt the professions which tend to make the nation; that they should enter public life and help purify our politics; that they should give up the chance of large fortunes and instruct the youth of the land; that they should enter the ministry of the church and preach the gospel of Jesus Christ, which alone can make us free.

That is a part of the deepest love. Not success for the children, which seems to reflect back upon the parents and touches them with vanity, but usefulness and service to the highest interests of men. It is helping them to lose their lives, knowing full well that they shall so gain them.

There might be such a revolution if we would do that—if we would fan the kindling hearts of the young. They are prepared for self-sacrifice and attempts at high achievements. Do not call it quixotic and impractical. Learn from them. If we will encourage the visions of the young, they will come back to us. Your sons and your daughters shall prophesy, and your old men shall dream dreams. Dreams of what their children shall accomplish; dreams of what they themselves shall grow to in the eternity that stretches out before them.

This is the real relation of the home to the school. The home is the place where the spiritual life is born; where it is nurtured and developed. Where this is done the school can help to rear a race of men who will make America not simply a great commercial nation, but also a power for righteousness and for Christ in the years of struggle which lie ahead of us.—*How to Help Boys.*

WHAT CAN BE DONE FOR CHILDREN WHO NEVER GET BEYOND THE GRAMMAR SCHOOL.

BY W. H. BENEDICT, ELMIRA, N. Y.

I have long felt that there ought to be some modifications made in our courses of study to meet the special needs of the great numbers who never get beyond the grammar school. We are apt to lose sight of the fact that a very large percentage of our pupils drop out of school early and enter at once upon the practical duties of life.

So long as the state contributes so liberally for the education of her children, she has a right to demand full returns for the money expended. The state assumes that the product of this liberal expenditure of money shall be the law-reverencing and law-abiding citizen. That being the case, this idea should characterize the entire school curriculum. While we need not lose sight of the mental training that comes from well-directed work, nor fail to direct the work towards the development of a sturdy character, there are lines that should be strengthened and special work that should be broadened to meet the necessities of the case.

I wish to lay special stress upon the idea that the finished product of our public schools should be the American citizen. If the schools are responsible for the preparation for citizenship, the course of study should be such as will give the best practical preparation for the duties incident to the same. All courses essentially provide for direct and specific culture looking towards general intelligence, but there seems to be a lack of provision for that special training that makes for true citizenship.

The state has a right to expect that pupils shall pass out of the grammar school imbued with the spirit of true patriotism and with a knowledge of our institutions in keeping with their age and advancement. A careful study of our history, with every page full of the struggles and triumphs of a determined peo-

ple, and a systematic course in biography embracing the leaders who have been mainly responsible for the establishment of our government and its remarkable growth, cannot fail to produce the desired results, if directed by the conscientious teacher who is in direct sympathy with the object in view. Through the study of the elements of civil government and a practical application of its principles in the discipline and management of the school, which is a commonwealth in miniature, the pupils can be brought to understand the general plan of our government, the duties of citizens, and the advantages that come from absolute obedience to law.

A citizen worthy of the name must be a politician in the true sense of the word. He owes it to the state and nation to take an active part in politics. His voice and influence should count for honest government and against corruption. He should emancipate himself from blind partisanship and labor for a wise and honest administration of public affairs. Much instruction can be given in an elementary way, while pursuing the subject of history and civil government, that shall bear fruit abundantly when the pupils shall arrive at the age when the ballot shall be placed in their hands. In the light of past experience, the schools must furnish this instruction in order to correct some of the existing evils incident to modern political methods.

I cannot emphasize too strongly the need of strengthening the work in English, and especially in reading. When we consider that reading is the key to all knowledge gathered from the printed page, it becomes a prime necessity that our pupils, when they leave the grammar school, shall be well armed and equipped to correctly interpret the recorded thoughts of others. I refer now to the true idea of reading independent of oral

expression—the getting of thought from the written or printed page.

A thorough knowledge of English implies the ability to speak and write the English language correctly, fluently and elegantly. That too many of our schools fail to secure these results is a blot upon our school curriculum and school methods. I am strongly of the opinion that graduation from our grammar schools should signify the ability to stand before an audience and talk intelligently and with a fair degree of success upon any subject with which the pupil is familiar. A course of study arranged with this in view will successfully secure the desired

results and be none the less deficient in material for training along other practical lines. I have always felt that it was a great mistake to drop out the old-time rhetoricals. They had their faults, yet they possessed great educational value. If they could be modernized and properly dignified, they would fill an important place in the training of our youth. The pupils in the advanced grammar grades ought to be sufficiently well developed mentally to receive practical instruction in extemporaneous speaking in keeping with their age and grade. This, I believe, is training for practical citizenship. —*The Educational Gazette.*

PLACE OF GENERAL HISTORY IN SCHOOLS.*

Your committee appointed to consider the following resolution, "That it is the sense of this conference that general history, so-called, should not have a place in our secondary schools; but that even when one year only is devoted to history it should be given to some important division of the subject," would respectfully report that, after a careful consideration of the questions involved, they would answer both propositions in the resolution in the negative, viz., that general history so-called *should* have a place in our secondary schools, but should extend over at least two years, and that when only one year is devoted to history it should not be given to some important division of the subject.

The committee would heartily disapprove of any course of study which permits only one year of history work, and would not be understood, in anything that follows, to sanction directly or indirectly, such a course.

The committee believes that the importance and value of the study of history cannot be overestimated, and would most cordially indorse the report of the Committee of Seven, which recommends a four-year course in history as follows:

First Year—Ancient history to 800 A. D.

Second Year—Mediæval and modern European history.

Third Year—English history.

Fourth Year—American history and civics.

One member of the committee prefers a three years' course, and the rest concur, where a full four years' course is not practicable. The three years' course is the one recommended by the Committee of Seven, as follows:

Second Year of High School—Ancient history to 800 A. D.

Third Year—English history with special reference to the chief events in the history of continental Europe.

Fourth Year—American history and civics.

The committee is agreed that it is desirable to introduce into the course in history the elements of the study of sociology and would recommend that steps be taken by this conference looking toward this end.

In regard to the second part of the resolution, which contains the question most liable to be controverted, the committee is very clear in the opinion that

*Report of a committee to the fifteenth educational conference of the academies and high schools affiliated or co-operating with the University of Chicago, held in November, 1901. The members of this committee were Professors C. W. French, B. F. Buck, A. A. Reed and A. W. Small.

general history should be taught in preference to the history of any isolated period, where there is time for only one, but there is some difference of opinion as to its place in the course, one or two members of the committee believing it should come at least as late as the third year, while another would have it come earlier in order to reach the largest possible number of students.

The reasons which have led the committee to this decision are very briefly as follows:

1. There are many great facts and persons in general history with which every well-informed person must be familiar in order that he may understand the numerous allusions which he will come across in the course of his reading and in his daily life. Without this general information he will be wholly at a loss to understand the life conditions by which he is surrounded, both in their causes and their tendencies. This information cannot be obtained in any other way than by a general survey of the world's history; and in general it will not be secured at all unless such a course is provided in the schools. It is far more important that the student should be measurably familiar with the great sweep of history and the movements which have laid the foundations of civilizations and promoted its progress, than that he should have studied with more care the comparatively unimportant and limited life of far-away Greece and Rome. Even if he secures a better discipline (which is not certain), and acquires a taste for going to original sources (the value of which is at least questionable), it certainly cannot compensate for his entire ignorance of the great realm of history outside of this area. The simple statement of this con-

dition seems to the committee to be conclusive.

2. The second reason is not utilitarian, but is based upon the nature of historic materials, and the method of presentation which they seem to demand inherently. It is not possible to present this argument satisfactorily within the limits of a report of this kind, but roughly and categorically it may be stated as follows:

History is an organic unit, and not an assemblage or succession of isolated or incoherent units. It must be remembered that history is not mainly or primarily a record of facts, but that it is the story of human life, as it has gradually developed in individual character and human institutions. In each generation is summed up the results of all the vital processes of human life from the very beginning, nor can its social and civic conditions be satisfactorily studied except in the light of bygone centuries. Thus the study of history rightly becomes the study of human life and society as the increasing product of evolutionary forces acting under laws which are fixed, and thus have been operative from the beginning of all things.

If this is true then history is a science, and must be taught by methods which will submit themselves to scientific tests. From this standpoint it may easily be shown that the study of history by isolated periods is unscientific and totally inadequate. It violates the generally accepted canons of scientific research, and is certainly out of harmony with what has come to be almost a pedagogical axiom, that any subject should be presented as a whole—in its entirety—before any part of it becomes the object of special research or intensive study.

Upon these considerations the conclusions of the committee have been based.

PLAIN WORDS ON TEACHERS' WAGES.

BY WILLIAM M'ANDREW.

The words of a wealthy man, a large giver to educational work, are thus reported in a newspaper account of one of his recent speeches: "For the teacher cannot be a slave. She must think and act for herself. On her depends the training of the children of a free people. She rocks the cradle of the state. What profession is so noble and so sacred? All honor to the teacher!"

On the same evening he entertained at dinner the designer of his yacht, while the teacher of his children dined with them, as always, in the servants' ordinary. Besides being the sole employer of one teacher for his own little ones he is trustee of a great school and has the deciding voice on the salary of the women who do the chief work in it. On his pay-roll are teachers at \$450 a year, in a city where hall bedrooms and board at seven dollars a week is not considered high, though it is luxurious for a woman who would thus have a balance of ninety-five dollars for a year's expenditure for clothing, books, car-fare, amusements and everything else.

This gentleman in an interview on salaries says: "We want the best teachers, but we don't propose to pay two dollars where one will do." He is not a monster of cruelty or selfishness. He is a genial, gracious citizen, generous in various directions. He makes up deficits out of his own pocket. He blows no trumpet over his alms. He has the same ideas about schools and teaching as nine-tenths of the readers of this page. He, in common with almost every citizen, lacks the habit of exercising his imagination in the direction of putting himself in the teacher's place. That is the trouble with you yourself. You clap your hands together when speakers glorify the great American public school, but you grasp your pocket when the school tax is beginning to look large. You will not investigate the personal needs of those whom you expect to bring your children

to broad views and generous ideas. Here is what you say through the mouths of prominent speakers in political campaigns:

"The school teacher controls what the rest of us do not control—the future of manhood and womanhood which must make up the rich fruitage of our whole civilization."—*Edward M. Shepard.*

"The work of the teacher branches out like the pines of the Carolinas; it reaches the family, exalts the home, pervades society with its ennobling influences, strengthening the foundations of the state, and adds to the glory and magnificence of the nation."—*Charles E. Robertson.*

Here is what you do:

I. "Nearly all classes, old and young, look down on school teachers as upon unfortunates who have adopted teaching because there is no other way of livelihood open to them."—*John Gilmer Speed.*

II. "The community does not tempt the highest type of mind toward this calling because of the inadequacy of rewards and the uncertainty of advancement in the teaching profession."—*Richard Watson Gilder.*

III. "We commit our educational machinery to the unfit and inexperienced. We need able men and women of mature ability, but we do not pay the price that attracts such service."—*John Davidson.*

IV. "We have been careful as the nation waxed in material prosperity to keep the pay of teachers down and to shove them into the social background more and more. How can men of the highest class be expected to devote their lives to a profession which yields little more than a pittance when one is thoroughly successful? The state is satisfied to pay the average instructor about as much as the city laborer or a horse-car conductor receives."—*Robert Grant.*

V. From the average monthly salaries of men and women teachers given in the last report of the United States Commis-

sioner of Education, and from the average length of the school year, the average yearly salary of male teachers is estimated to be about \$328.80 and of women teachers \$274.60.

Such are the separate testimonies of an essayist, an editor, a professor of economics, a judge and a statistician. And yet some magazine writers express wonder that education is the movement which philanthropists have of late selected as the beneficiary of their gifts. Bequests in sums of \$5,000 and upward in 1900 amounted to \$23,000,000 for purely educational institutions, with an added \$3,000,000 for libraries. In 1901 similar gifts aggregated more than \$50,000,000.

Meantime an average of several strong writers per month wonder why education is not better than it is. I know a man who owns the finest launch on Hempstead harbor. It is finished in mahogany, has silver-plated metal work, and every fitting in the most luxurious style. Its early trials were failures until the expert found that the feed-pipe from the fuel tank was so small that the engine had nothing to eat or drink, whichever it may be. The givers to educational institutions put up splendid buildings and equip them with expensive apparatus, but the expenditure of more money on any particular or general group of men and women, the teaching force, which is the real essence of every school, is a proposition that does not yet appeal to the men of means. I cannot understand this reluctance. The proposition seems so reasonable. Here is the school. Its whole aim is service to the community, through an output of high-class graduates. The teachers must render this service. Books, building, all material things are only tools. The real school is the teacher. The generosity, the ample provision for life made right there in the condition of the teacher would seem to promise the surest and quickest return, but this is a subject which trustees dislike to discuss and donors regard as an impertinence. Whether it is because apparatus stays in one spot and makes a show; whether it is because buildings are large and imposing and may have one's name carved on them; whether it is because of the historic contempt in which schoolmasters have been held so long,

as echoed in literature from Horace to Dickens, who can tell? Were I a millionaire philanthropist I should dread that any splendid pile of mine should by its magnificence shame the penury of the leading workers in it or be associated with constant discontent, unnecessary sacrifice, and dreary economic slavery. It seems to me I could desire no greater glory than to be the founder of a school wherein the teachers were held in the highest honor and regarded by me, at least once a month, as of more value than stone and glass and iron.

For when you come to study the theorists you find them all agreeing that personality is the main feature of instruction, and when you come into practical contact with a school you find that it is the personal teacher of your children that concerns you. And so you must conclude that the teacher is essentially education.

The American people, when it speaks through the orator and the essayist, says it wants from the schools, intelligent, patriotic, healthy, and happy citizens. There is no building or apparatus or curriculum or system that can turn out such a product unless in connection with it there are intelligent, patriotic, healthy, and happy teachers. It seems unnecessary to suggest that you must give teachers the means of supplying themselves with these fine qualities. They cannot obtain these means except from you. Teachers cannot, in appreciable numbers, establish schools of their own and by tuition income get more money in order to live more happily, for you, the American public, have a monopoly of the education business. You are practically the only employer. You can and do pay what you please. Your present discontent with education, awakened by the rise of anarchism, is largely due to your own treatment of your teachers. It does not matter how enthusiastic and hopeful are the teachers you may get every year fresh from the training schools. Unless you treat them well they are bound to deteriorate. You know how true this is of a horse, or a flower, or even of an automobile; but you seem to think teachers can live by a law different from that of other organisms. Pause and think that the pauperizing of teachers in any com-

munity is a constant menace, not only to the community that commits the sin but to every community to which the pupils of such teachers go. What you think you save from teachers you lose not only in their service, but on hospitals, courts and jails.

Who is going to look after this matter of teachers' wages? A gentleman of large wealth whom I heard discuss the salary question recently, deplored the introduction of commercialism into education. He said, quite truly too, that education was so much a matter of love that its laborers must be inspired with the missionary spirit and not degrade their noble calling by the unworthier pursuit of gain. That same man hires teachers by asking them, "What do you think you are worth?" and beats them down to a low figure, using this commercial method to lead the teachers to a nearer approach to the uncommercial missionary spirit. This gentleman is further quoted as saying, "I think you are wrong ever to expect a teacher to enjoy to any great degree the luxuries or even all the conveniences of life, or above all to expect the trustees of an institution to stand between a man and the consequences of a too liberal expenditure of the money. If teachers would stop whining about their pay there would be more dignity to their calling."

There is a good deal of this feeling about wages among the educational leaders, too. Superintendents and those associated with the hiring of teachers seem to acquire this elevated thought. The National Educational Association does not take up an investigation of wages. The leaders have one and another reason against it and go on devising programmes and presenting papers on the management of teachers and the ideals of education. But the educational field is thus cultivated enough, heaven knows. This drilling, weeding, and holding before the plants pictures of the fruit they ought to bear might better give way to a movement for fertilizing the soil. What is the use of lecturing to death a man who gets \$328.80 per year, or a woman existing on \$274.60? There is not so much need of polishing the brass-work as of putting more fuel in the tank.

The task of bringing the wages of

teachers to a good living basis is bound to fall chiefly on those teachers who mean to stay in the ranks and teach. After a sufficiently long period of trying to make bricks without straw, enough of them will succeed in getting together to learn how to state their case effectively.

I love that scene in the life of the old Scotchman, Murdock, who, after furnishing for years the brains and skill that made the fortune of that firm of first engine-makers, Boulton & Watt, one day spoke out like a man and ended the long series of snubs, oppression and contempt which had been his portion. Would that, for one brief moment, the whole public could be fused into one personality that the teacher might frankly and honestly speak to him her mind. We should hear something in this fashion:

"O, taxpayer, you dear bugaboo, you bogie with which politicians try to frighten themselves. Let us talk sense for two minutes. I am a school teacher. You entrust to me your dearest belongings and you ask that I shall make them noble men and women no matter what ignoble traits you and your ancestors have put into them. I serve as mother to your boys, fifty and sixty at a time. I have heard your wife declare that one nearly drives her crazy, but I have the fifty all at once and long hours at a stretch. Day after day, year after year, I take these fifties and successive fifties and try to hold before them, unworthy as I may be, the praise and glory of a manly life, a clean and honest and generous life. I have washed their dirty little hands, bound up their cuts and scratches, sympathized with their childish griefs, loved the little rascals on days when I felt well and tried not to hate them on days when they made me ill.

"Twelve years of daily work with little children has not made me great, taxpayer. I know that too well. I realize that my mind is dwarfed and petty, and the humorists in the papers, men whom I taught the rudiments of their skillful English, may easily hold up to ridicule me and my calling. You, taxpayer, with your society, your club, your outdoor sports, your business with men of large affairs, cannot know what it is to feel yourself stagnating in mind, and losing attractiveness of face and person in a

work like this. I am a woman, taxpayer, and I cannot with complete complacency, regard the change in me that comes from twelve years' work teaching boys.

"The wear and strain has been unnecessary. If I could have hired two rooms to live in, with a little window full of flowers like that one at the south of your home; if I could have driven through the park occasionally in a rented carriage like the one your lady owns; if I could have hired a dressmaker, who knew how really to fit a person (for I can do better work in better clothes) I would not bear my twelve years as if they had been twenty-four. An intelligent man like you is aware that teaching must rest on happy and good-natured management. You should know that my temper is the main consideration. You cannot treat me shabbily without degrading the quality of the service I can render to your boy. You cannot snub me without making your own son a snob. You cannot count me as one of your charities without reducing your own children to be charity wards.

"Do you want them to have the best? You must then make me the best. It is no Chinese puzzle. There is no calculation in your business more simple than this. Estimate what it would cost your own wife to live happily and well if you were gone. Why should you wish me, with my harder work, to live on less? It will be a good investment. Taxpayer, I render you high service and you put enough supervisors in charge of me to keep me from going to sleep. If I should stop my work, this country, in one generation, would relapse into barbarity. Every babe begins his life a savage. You expect me to perform the greatest work in civilizing him. Who taught you, yourself to read, to write, to figure, and to think and to earn your chance to pay taxes, taxpayer? Do not be afraid of wasting your money upon me. Who am I? I am your daughter, your sister, your neighbor's girl. Each dollar that you pay me builds up the better interests of your town. People move here and pay rent when I work well, for they want their children to come to me. I engage my living-room in your house; I pay my bills to you. You sell me groceries,

clothes and books. Come now, we have had enough of fault finding. If you want me to do better, help me, do not hinder."

The work of raising wages to the point where the best work is possible must be done by the teacher for the same historic reason that the incomes of lawyers, doctors and other professional men have been increased by none other than lawyers, doctors and other professional men. The teacher knows more about the requirements of teaching than any one else does. The teacher is more truly the guardian of education than any one else. It is most intimately the duty of the teacher to see that education does not fail from lack of such aids as are necessary for its best perfection. Means of living are certainly among such.

The first requisite is for teachers to unite and to study actual conditions. Let the teachers' associations get at the facts. Let them show the absurdity of the present common procedure in hiring teachers; the impertinence of the theory of supply and demand as applied to determining teachers' salaries; the weakness of the plea that teachers' pay should be short because vacations are long; the cruelty of the satire that says teachers make up in respect what they fail to receive in money; the failure of the missionary doctrine and, in short, the impossibility of the best schooling until the teachers are maintained in the condition for doing the best work.

To my mind the strongest practical service in this line comes in the effort to get those who fix the salaries to estimate in detail how these could be spent to the best advantage. This results in such evident absurdities (like Dido's covering the site of Carthage with a bull's hide) that there is only one conclusion: the teacher must be better paid. More valuable yet is an estimate of the cost of a fairly good living in the community in which the teacher lives. Those selected by the New York Teachers' Association are as follows:

BASIS OF ESTIMATES FOR YEARLY COST OF GOOD LIVING.

FOR MAN OF 30 TO 50 YEARS AND FAMILY.

Rent .....	.....
Light and fuel.....	.....
Table, ice, etc. ....	.....

Repairs and additions to equipment.....
 Service
 Clothing and care of same, man.....
 Clothing and care of same, wife.....
 Clothing and care of same, children.....
 Newspaper and periodical literature.....
 Books
 Church and charity
 Public spirit
 Amusements, concerts, etc.
 Car fare and travel (not recreative).....
 Extra expense of summer outing.....
 Health—Doctor, dentist, medicine.....
 Insurance premiums; life and fire.....
 If the man be a teacher, physician, or in any
 other profession, add for special periodicals,
 societies, conventions and mutual benefit
 funds.
 Hospitality
 Other items—specify
 Sinking fund that ought to be laid aside each
 year for emergencies.....
 Total yearly estimate for a good living...

FOR SINGLE WOMAN.

Rooms
 Board.....
 Service
 Clothing
 Newspapers and periodical literature.....
 Books
 Church and charity, etc.....
 Amusements, concerts, etc.....
 Car fare and travel (not recreative).....
 Extra expense of summer outing.....
 Health—Doctor, dentist, medicine.....
 Insurance premiums; life and fire.....
 Professional literature, societies, conventions,
 etc.
 Other items (specify)
 Sinking fund

Let the association get reputable men and women to fill out such estimates; publish them with the name of each estimator, make an average and submit the figures to boards of education, and request correction of the estimate by such as deem them too high. Ask for a living wage, insured by schedules beyond reach of the precarious chances of each year's changing financial demands of the various departments of city governments. Get more protection by state statutes. Intrench your position by every honest means that experience will teach you.

A definite example is more striking than general advice. It may be found in a study of the movement that resulted in giving to the teachers of New York City the highest wages paid in any school system in the world. Five or six years ago a few men and women, public school teachers in the metropolis, began speaking and writing on "the living wage" for educational workers; they copied from

the city records the wages of various officials, messengers, stablemen and street sweepers and compared them with those of teachers. They printed the comparisons in the newspapers, distributed them as pamphlets, saw different members of the boards of education, had hearings before committees of the boards, and finally secured the passage of schedules of salaries that were great improvements upon previous ones. These schedules, however, proved to be more academic than practical, as the Board of Estimate declined to apportion sufficient money to pay them. This is the point to which several reforms of teachers' wages have recently gone in various cities, only to stop and die. In New York they were carried past this stage by various hard-working persons, and largely through the help of Senator John F. Ahearn, whose bill, after several delays and one veto, became a State law, requiring the financial authorities of the city to pay such schedules as the school boards might make and requiring the school boards to keep above certain sums in the yearly wage of certain teachers. This law was unique among educational measures. As a usual thing the Legislature says the teacher shall not receive more than so much per annum, but this law said she shall not receive less than six hundred a year. It went into operation in 1899, and met with early opposition from the financial officers of the city. They refused to apportion sufficient money to pay the new schedules. In some cases the boards stood by the schedules; the teachers brought suit and won the money. In other cases the boards withdrew the schedules and no action could be taken. The treatment of the educational employees by the officials of the city treasury resulted in such distress that over a dozen bills for relief were introduced into the State Legislature by as many members. The thing most needed was an insurance of sufficient funds to pay the teachers' wages. Wm. H. Maxwell, the present City Superintendent of Schools, who previously held a corresponding position in Brooklyn, had for many years been an agitator for higher wages for teachers. He was among those who early proposed that a certain per cent of the money raised by taxation be reserved

by law for teachers' wages. Thus, whatever emergency might arise, or seem to arise, the constant necessity of educating the children would not suffer. This feature was embodied in a bill at Albany. The movement for better pay enlisted the active support of Senators Ford, Ellsberg, Slater, Stranahan and Marshall. Debates, discussions and hearings occurred in great numbers. The result was a new bill which reaffirmed with additions the Ahearn schedules, and added the saving provision that each year four mills on every dollar of assessable property should be set aside for the fund from which teachers should be paid. This Davis bill was fought with much bitterness by many officials of New York City and by some leading members of the school boards of Brooklyn and Manhattan. The city superintendent of the schools took the floor at Albany for it. President Nicholas Murray Butler, of Columbia, requested by Governor Roosevelt to advise him on the bill, took luncheon with him, and the bill was signed over the Mayor's veto and became a law. From the beginning of the appeals to the various school boards, through all the discussions over various schedules and the debates in the Legislature, the plea for the "living wage" was always prominent. New York has now provided by law that no regular teacher of the greater city must

be expected to live on less than \$600 a year, and as experience and merit become evident increases of pay are made, so that a grammar school female teacher may reach a salary of \$1,500 and a male teacher \$2,400 per annum. High school salaries run from \$700 to \$2,500 for women and from 900 to \$3,000 for men. Principals of elementary schools, if women, receive from \$1,400 to \$2,500 per annum; if men, from \$2,100 to \$3,500. High school principals receive from \$3,500 to \$5,000 a year. These figures compared with teachers' wages elsewhere seem liberal, yet they average the lowest of those paid for brain-work in any department of the city government. Before the Ahearn law New York teachers' wages were less than those of street cleaners and elevator boys.

I expect to see the day when a man with millions to give for the education of the children of his fellow-men will endow his gift upon the flesh and blood and spirit of teachers rather than on blocks of wood and stone; for there are preachers who minister five hours a day five days a week unto such as may make the kingdom of heaven upon earth; for there are physicians who attend the birth of all those nobler qualities, mind and heart, that make noble men and gentle women. These are they whom you call teachers.—*The World's Work*.

THE NEED OF TRAINING FOR THE COLLEGE PRESIDENCY.*

BY FRANK PIERREPONT GRAVES.

Six years ago, when I was a professor of Greek in a New England college, it seemed to me that the president led a very easy life. He received nearly twice the salary of a professor and did scarcely any teaching; and his brow told nothing of the care within. When I finally made up my mind to accept an executive position in the West, this president's wife, who had always been a very kind friend, said: "You don't know what you are undertaking. It's a dog's life."

While the latter statement was not intended to be taken literally, and has to a certain extent proved a false prediction, it is not difficult now for me to realize what was meant. My only regret, however, is that I entered on the work of administration so poorly prepared, and that it has taken so long to learn comparatively little. Possibly, if I had been taken aside by my president and told how to avoid the snares and solve the problems that would come, I should not have been

*Abstract of a paper published in *The Forum*.

altogether too conceited to listen; but this may be doubted. At any rate, when one thinks of all the difficulties of a college executive, it is a matter for surprise that no training or advice for so important a work has yet been offered. It may be interesting to review our present educational tendencies, and inquire why such provision has not been made.

The present is an era of specialties. That sounds rather trite, but it is a truth the full significance of which we sometimes fail to realize. In the college world especially, a jack-of-all-trades was never so distrusted as at present. A college teacher today must have studied one subject thoroughly, although, as it has been often pointed out, his general knowledge need not be limited. As a university president, I receive every year applications enough to fill each position in the institution fifty times over. An effort is made to give each letter careful examination and polite treatment, but there is one style of letter that is very trying. It comes from the man who states that his specialties are Greek, Latin, French and German; that he can teach mathematics and chemistry; and that he feels that he would be successful with history and philosophy. It is difficult to reply courteously to such a man, as it is evident that he either is a humbug or has little conception of the quality of work now done in a university.

A college graduate who wishes thoroughly to prepare himself for college teaching may do so in any one of a dozen superior universities at a merely nominal cost. He is not really in earnest unless he is willing to do this. He may make a special study of any portion of the entire field of knowledge, from Sanskrit to entomology, from electricity to paleontology, and from the culture of the soil to the physics of the celestial bodies. There is open to him a complete preparation for every possible specialty save one, the executive office. But should he choose this line, which, because of its relation to the rest, is in a sense the most important of all, he must become skilled as best he can. The tyro at the bar practises in a moot court before he addresses a real jury; the young divine bores his classmates with his preaching ere he edi-

fies a congregation; the embryo doctor may first try his scalpel on a cadaver; and even the school teacher acquires her skill in a training school; but the poor young college president, without a particle of specific preparation, is pushed out into the midst of things, and must stand or fall by the result. For him there is no training school except actual practice, and he must use his scalpel on real life. Fortunate, indeed, is the youthful president who is permitted to make his experiments in a small institution, or among people who are more kind than critical.

Why, then, has no provision as yet been made for educating young men for executive work in our colleges? Probably many reasons will suggest themselves. Two may be briefly outlined. In the first place, there is a conventional modesty which would operate powerfully to deter a young man from publicly enrolling himself for the necessary training to become a college president. He may, with entire propriety, it seems, seek to prepare for a chair of German or astronomy; but any effort to fit himself for a presidency is viewed as a mark of inordinate ambition. A distinguished scholar who had been elected president of a university once stated that he had never sought the headship of an institution of higher learning, and would not think of accepting an offer of such a post unless the conditions were most favorable. Those, however, who had followed this gentleman's career reported that for several years previously he had been doing everything in his power to fit himself properly for executive duties. In view of our foolish conception of modesty, it is easy to pardon his want of candor, especially as the careful training he had given himself resulted in his making a great success of administrative work.

An instance of a different method of procedure was presented two years ago to the regents of the University of Washington. They received a letter from a young man, about to complete his course at a certain theological seminary, who stated that he had met with considerable success as a teacher and as administrative head of a preparatory school, and would be glad, if the regents saw fit to dispense with the present executive, to become

president in his stead. The regents referred the letter for an answer to the writer of this article. At first he was tempted to send a somewhat caustic letter in reply; but the more the matter was considered, the more it seemed that, despite the shocking abuse of professional courtesy, the young man deserved some commendation for his courage in asking for what he wanted, and for preparing himself properly for the object of his ambition.

Again, it is probably the opinion of many that college administration cannot be taught, because it is so far from being an exact science. Its problems seem isolated, and they vary greatly under different conditions. But, while the theory of administration can hardly be said to be exact in the same sense as the science of mathematics, an executive of experience could teach a novice some general principles that would save him many sleepless nights and days of worry and failure. It may be well in some matters to let a man work out his own salvation; but such a course is hardly profitable for the young executive, and is certainly not fraught with the best results for the unfortunate professors and students under his direction.

Probably the newness of the present type of college president accounts in part for the prevalent feeling that administration is not yet an established science. It is a familiar fact in the history of American education that through the first third of the century we have just passed a clergyman was regarded as the ideal college president. The essential aim of a college course was preparation for the ministry, or, at the widest, the development of character. These objects, it was conceived, belonged peculiarly to the church; and it was not unfitting, therefore, that ministers should be at the head of institutions of learning.

But a college education was eventually demanded by young men preparing for every sort of profession, and so academic training came into the category of scholarship rather than of theology. This fact was reflected in a generation of college presidents who were pre-eminently scholars, and ministers only secondarily, if at all. Within this middle epoch flourished Woolsey and Porter at Yale, Felton at

Harvard, and McCosh at Princeton. Williams also during this period contributed to history the president who was so saturated with aggressive scholarship that Garfield claimed that it could exude and permeate the farther end of the log.

This type of executive, however, did not continue quite half a century. With the inauguration of President Eliot, in 1869, the present ideal of a college president began to develop. From action and reaction among the colleges it has now become a fixed type. A college president, according to this latest ideal, is an executive in the fullest sense of the word. Though in entire sympathy with education, he is a business man and a broad-minded man of affairs, with the gift of diplomacy and the alertness and poise of an *entrepreneur*. He may be a scholar—and very often is—or even a minister; but these qualities are merely incidental and have little to do with his success as an administrator. The “executive” president is at present the latest and best type and in developing our science of administration we may safely follow his lead.

There are always more openings than there are men competent to fill them. A list of colleges published in an almanac for 1899 revealed the fact that nearly forty colleges were then without executives, and among them were such institutions as Yale, Amherst, Oberlin, Marietta, Brown, Colgate, Rochester, California, Oregon, Iowa and Cincinnati. During the college year just passed, the presidencies of Northwestern, Wells, Iowa College, Williams, Pacific, West Virginia, Maine and other institutions, have all been vacant.

This constant demand for college presidents is easily explained by the scarcity of men fitted for such positions. An inspection of the careers of the faculty of the University of Chicago, as given in the catalogue, shows that about twenty members of it have at some time been college executives and have resigned the post. It is easy to recall instances of men standing high in the world of scholarship who failed in the executive office, or who found the work distasteful and had the good sense to return to the places which they adorned. Two of the greatest scientists in the United States attempted university management for a

considerable time before they decided that executive work was not their forte; while one of our most noted Hebrew scholars, who took up administration, and a college president who had previously made a reputation as a Hellenist were both ultimately forced to resign the presidential work they had undertaken.

On the other hand, it has sometimes been difficult to induce well-qualified men to accept the executive office. Professor Bessey, whose fame as a botanist is not confined to this country, has thrice refused the chancellorship of the University of Nebraska, although not for the same reason that influenced Cæsar in a similar matter. "No, gentlemen," he has repeatedly said to his regents, "I am a botanist, and I cannot be tied down to an executive desk at my time of life." An educator of great prominence who is still a professor at Columbia, but who is believed by many to possess extraordinary executive ability, is said to have already seventeen presidential scalps on his belt. The merest accident brought David Starr Jordan into executive work, quite against his will. That was more than sixteen years ago. When he was once in the position his fitness was so evident that neither he nor the regents wished for a change.

There is surely a wide opening for any young man of ability who wishes to enter upon an administrative career. He must, however, expect to find many disagreeable features in the work. There is no need to mention all of them, but they may be summed up under the heads of constant worry and the sacrifice of scholarship. Yet executive work may be well considered a species of scholarship in itself, and the cares and worries of the office should be met with as philosophic a spirit as possible. That readiness to meet everything that may come should be the spirit of every young college president; and he may at the same time remember, with pardonable pride, that, by the char-

acter of his work, he is keeping himself out of many of the narrownesses of ordinary scholarship, and is doing a real service for humanity.

Certainly, there is nowhere a field of greater usefulness and honor than the college presidency for a young man of the right scholarship, sympathy, tact, energy and courage. While all the qualities enumerated must be possessed to some degree, they are here mentioned inversely to the order of their importance. The young executive may lack much in scholarship and sympathy, and even a little in tact, but he cannot possibly succeed without energy and courage, especially the latter.

The means for starting such able and ambitious young men aright and insuring the efficiency and success of their administrative work must be soon forthcoming at some of our large universities. Methods of training may have to be developed slowly, but it is time for a beginning to be made. The future executive should at least take as broad a course as possible, specializing on some subject of large import, such as a branch of the social or philosophic sciences, and in addition should have the benefit of a practical course of lectures from a successful and experienced president. What the subject and purpose of each lecture should be is an important consideration, which would require a more detailed discussion than the limits of the present article will allow.

It is rumored that next year President Wheeler, at the University of California, will institute a course of lectures on college administration, and that Dr. Harper intends eventually to establish a chair in the subject at the University of Chicago. Speed the day! Meanwhile there is a perfect caravan of young college presidents going and coming from Cambridge, where for a short time they may sit at the feet of the great executive president, Charles W. Eliot.

THE SOUTHERN EDUCATIONAL ASSOCIATION.

BY MARY HALL LEONARD.

The eleventh annual convention of the S. E. A., which was held in Columbia, S. C., during the four days following Christmas, while it had some disappointing features, was, nevertheless, a notable gathering, which must have a marked influence on educational movements.

The enrollment of members, though about the same as at Richmond, Va., a year ago, was considerably less than had been hoped for. The incompleteness of the Charleston Exposition led some from a distance who had planned to come to postpone their visit to South Carolina until later in the season. Many of the teachers within the state also, who would have liked to attend, felt that the short Christmas holiday could not be spared for attendance at teachers' meetings, to the disregard of all home claims.

At the closing business meeting there was a vigorous discussion as to the future plans of the association. Some had questioned the advisability of maintaining at all a distinct southern association, saying that southern questions could be sufficiently discussed in a separate department meeting within the national organization. Dr. Junius Jordan of the University of Arkansas, however, gave statistics showing an average of about 5,000 teachers in each of the twelve Southern states, and that only about one-fourth of one per cent, or about fourteen teachers to a state, attend the national meetings. It was also argued that the Southern teachers who do attend the national meetings are the very ones who are most active in sustaining the Southern association. Dr. Jordan strongly advocated a plan of making Lookout mountain the permanent summer home of the S. E. A., and turning its meetings into a kind of Chautauqua, or a summer school of three or four weeks' session. This plan was not adopted, but the discussions showed a strong sentiment for maintaining and

strengthening the S. E. A. in its own special lines. It was decided, however, to return to the original plan of a summer meeting, and the twelfth annual convention will probably be held next July, either at Knoxville, Tenn., or San Antonio, Texas.

But although the size of the convention was in a measure disappointing, it included many distinguished educators from all parts of the South, and a few from other states as well.

The slim, towering form and dramatic intensity of utterance of the president of the association, State Superintendent G. R. Glenn, of Georgia, made him a conspicuous figure, not only on the platform of the New Columbia Theater, where the general sessions were held, but in the various receptions and social functions which crowded all the hours not otherwise occupied. Also prominent in the meetings, though presenting a marked contrast to Mr. Glenn in outward appearance, was the newly-elected president of the association, State Superintendent William N. Sheats, of Florida. The address given by Mr. Sheats on "School Supervision" was to have been discussed by another leading state superintendent, Hon. T. F. Toon, of North Carolina, but owing to the illness of the latter, this part of Friday's program had to be omitted.

The principal address of the first evening was by Dr. Charles D. McIver, president of the Normal and Industrial College of Greensboro, N. C., who spoke in a rapid, effective way without notes, on the important subject of "Skillful Educational Leadership in the South." Dr. McIver said that the Southern states were now passing through an epoch-making pioneer educational movement, similar to that which took place in Massachusetts in the days of Horace Mann, and that much of vital importance depended upon

the choice of leaders and the decisions of the next few years. Among those who are now successfully directing these beginnings, he declared that he could mention without fear of contradiction the names of Bishop Galloway, Dr. J. L. M. Curry, and Governor Northen, of Georgia. Dr. McIver's speech, while awakening serious thought on serious questions, was enlivened by a rapid succession of racy illustrations and witty anecdotes that kept his audience in a constantly overflowing state of amusement and good humor.

Another leading address which dealt specifically with Southern questions was given the next day by Superintendent L. B. Evans, of Augusta, on "The Mission of the Rural School." Mr. Evans declared that while the greatest Southern question in educational as in other lines is the negro question, yet scarcely second to it are the cotton-mill question, with its child labor complications, and the question of giving efficiency to the country schools, at present so deplorably weak in all parts of the South. He advised that the present system of supporting small and isolated schools in country neighborhoods should be superseded by the plan of building large and well-equipped schoolhouses at convenient centers, and making each of these the focus of intellectual and social life for its own region, at the same time making suitable provision for the transportation of children to these central points. This plan for rural schools, though at present wholly new to the South, is awakening thoughtful discussion in various quarters.

The Southern cotton-mill, or child labor, problem was not specifically discussed in any set paper presented at this meeting, but the association placed on record its sentiments on the subject in the form of a strong resolution, which it is hoped may influence the legislature soon to convene in Columbia in its action in regard to a bill that will be introduced relating to this important subject.

The ever-present negro question was not discussed specifically at any of the sessions of the convention. This was a white man's assembly, and the chief thought was centered on the white schools. Yet, there was no disposition to blink the issues presented by the col-

ored schools, nor to weaken their financial support. It was tacitly acknowledged that all public efforts for white schools must extend themselves to build up colored schools as well, and this not simply for the benefit of the negro alone, but for the safety of the white race.

The colored schools were included with the white by Dr. Charles W. Dabney, president of the University of Tennessee, in his important paper on "The Problem of Our Public Schools." Some of the members of the association were disappointed in not hearing a promised address by H. B. Frissell, president of Hampton Institute. Mr. Frissell was present at the meetings, but remained in the background, as a listener and not a speaker, saying in private that, although he was asked to give a paper, the placing of his name upon the advertised program had not been authorized by him.

A still greater disappointment was felt by all the members of the association in the necessary absence of the honored Dr. J. L. M. Curry, on account of illness in his family. A part of his important paper on "Free Schools for All the People," with its telling arguments and uncompromising statistics, was read by another. But it lacked some of the convincing and inspiring effect that would have been produced if the distinguished agent of the Peabody and Slater funds could have been there to deliver it in his own personal way.

Among other notable addresses which should be mentioned was the philosophical paper of Dr. William T. Harris, on "Courses of Study," dealing especially with plans for the study of geography in lower schools. There were also two scholarly addresses by Dr. Josiah Penniman of the University of Pennsylvania; one, an evening address, on "Light on the Old Testament from the University of Pennsylvania Excavations at Nippur"; the other, a Sunday afternoon address on "The Literary Study of the Bible."

The closing session of the S. E. A., which occurred on Sunday evening, was devoted to Sunday school work, the chief speakers being Dr. Phillips, of Richmond, the Sunday school secretary of the Southern Presbyterian church, and Professor P. P. Claxton, of the Normal and Indus-

trial College at Greensboro, N. C., who is the secretary of the association, and had been a prominent speaker in the meetings of the normal department.

As is usual in large educational meetings, much of the most important work of the convention was done in the department meetings which were held each afternoon and found abundant and hospitable accommodation at the various educational institutions of the city. It was said that at one time there were no less than eleven meetings in progress. The papers and discussions presented at these meetings were similar to those that might be heard in the National and Northern meetings of the same nature, and showed that the speakers were well abreast of the educational thought of the age. Dr. Ira Remsen, president of Johns Hopkins University, who delivered an important address before the combined departments of secondary and higher education on the assigned subject, "What Should Southern Secondary Schools Attempt in Science Teaching?" voiced the general sentiment of these department meetings by saying that he knew no reason why the Southern secondary schools should attempt anything different in science teaching from that which should be attempted by the rest of the secondary schools of America.

The promotion of industrial education, the establishment and methods of kindergartens, the subject of school and college athletics, the perfecting of normal school instruction, the details of school organization and grading, and methods of instruction in various lines of study, all received earnest attention from able speak-

ers. The attendance at these department meetings was necessarily small, but it is believed that the published volume of the proceedings will reach a larger audience and give a decided advance to educational effort in the Southern states.

There was one important meeting in progress during the convention, which the general public was not invited to attend. It was a two days' conference among the campaign committee of the New Southern education board, that was organized last year at a conference of Northern and Southern educational workers, held at Winston-Salem, N. C., to foster educational interests in the Southern states. At the close of the convention this campaign committee of the New Southern education board made an announcement relating to their plans for an important three days' meeting of the Northern and Southern conference to be held at Athens, Ga., about the first of May.

Before the final adjournment of the S. E. A., the committee on resolutions, in lieu of the ordinary resolutions of such meetings, offered a "Declaration of Principles," which was unanimously adopted by the association. By means of this "Declaration of Principles" the Southern Educational Association has announced its "unswerving faith in the principles of universal education," and its "steadfast purpose" to maintain these principles, and "to promote all the agencies needed to provide adequate facilities for the free education of all American citizens."—*Journal of Education*.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford,
203 Michigan Avenue, Chicago, Ill.

DUBBS' NEW PRACTICAL ARITHMETIC.

In preparing this book the aim of the author, Eugene L. Dubbs, was threefold—first, to cultivate habits of accuracy and rapidity in arithmetical computation; second, to develop the reasoning powers; and third, to make the pupils familiar with ordinary commercial applications of arithmetic. To secure this end, special attention has been given to clearness of explanation, conciseness of statement, and thoroughness of drill. Each subject is introduced by carefully worded definitions, followed by a statement of the principles involved in the process to be developed. After the study of the written solution of a model example, the rule is briefly stated, and the problems bearing on the subject are then presented. These, by their practical character and great number and variety, furnish the drill necessary to produce a ready skill in dealing with numbers. The matter throughout is carefully graded, reviews are frequent, and a long list of miscellaneous difficult problems is appended. (60 cents. American Book Company, New York, Cincinnati and Chicago.)

JEAN MITCHELL'S SCHOOL.

Angelina W. Wray wrote this little book with the hope that it would bring to some other teacher a message of cheer and inspiration. We believe that it will do so, for its pages were interesting and inspiring to the writer of this review. Jean Mitchell, by the power of a true teacher and without recourse to special accomplishments, brings a "hard school" into kindly co-operation. The lawless pupils are won over to a spirit of loving obedience and mutual regard and good fellowship. The weak and idle are inspired to courage and effort. The half-tone and text illustrations are well executed. (\$1. Public-School Publishing Company, Bloomington, Ill.)

LE VOYAGE DE M. PERRICHON,

L'ENFANT DE LA LUNE.

These simple and interesting texts are intended for elementary reading, and contain complete vocabularies, and notes explanatory of difficult idioms. In addition, "L'Enfant de la Lune" has appended to each chapter questions in French for conversation exercises in that language, and a summary in English of the contents of the chapter, to be retrans-

lated into French. The books are neatly bound, convenient in form, and reasonable in price; and will no doubt be welcome to teachers who desire elementary texts for class study.

Le Voyage de M. Perrichon is a comedy in four acts by Labiche and Martin and this edition was prepared for school use by G. Castegnier of the A. H. Custer School, New York. L'Enfant de la Lune, by Jeanne Mairet, was edited for school use by Edith Healy. (35 cents each. American Book Company, New York, Cincinnati and Chicago.)

THE CHINAMAN AS WE SEE HIM.

This little sketch, written by Rev. Ira M. Condit, D. D., brings the Chinaman before us as we see him on this side of the great Pacific. Mr. Condit has spent many years in missionary work among the Chinese, and says of them: "They are a people who improve upon closer acquaintance." China, he says, is "no hot-house plant, and cannot be forced to advance as fast as we could wish." All who read this book will have a better idea and opinion of the Chinaman and his characteristics. (\$1.50. Fleming H. Revell Company, Chicago.)

SOCIAL CONTROL.

For some time the writer of this review has been convinced that teachers do not read wide and deep enough. Our attitude toward the pedagogical tree has been somewhat like our attitude toward the natural tree. The central part or body of each is the most spectacular, and therefore makes the first and clearest impression. But in the natural tree we have learned that the body is only a connecting link and that the roots and leaves are really the functioning part. So in pedagogy, we are learning that what we have been treating in the past as pedagogy is only the connecting link, of which Embryology and Anthropology are the roots and Sociology and Ethics are the leaves of the complete tree of education.

If we would educate the child, we must know what tendencies, desires, and passions he brings to us from the past; and we must know what is his present equivalent and future needs for the life which he is to live after leaving school. The book which we have in hand is a book with roots deep in the past and with leaves and fruit high in the bright sunlight of the future.

The author, Edward A. Ross, is one of the keenest American analyzers of human acts and conduct, and his book is the product of his most careful thought and observation. Though

the first part of the book is not the most interesting, it is perhaps the most valuable. After stating his problem, the author gives us three chapters on the foundation instincts which enable us to live in peace and happiness with our fellows. Of these chapters on Sympathy, Sociability and Justice, the one on Justice is especially valuable, yet we are conscious that the author is trying to put into a very few pages what requires a book. Why is it that this, the most important social instinct of the Anglo-Saxon, has as yet received no adequate treatment? Others have created statues and built temples to the goddess, but no one among us has dedicated his life to an adequate understanding and treatment of the subject.

Part two is to us the most interesting. In it the author gives us a beautiful treatment of the meaning, function and limits of such things as Public Opinion, Law, Belief, Suggestion, Religion, Art, Enlightenment, etc., and shows us of what use each is in making us orderly, self-controlled human beings.

In these days of heated discussion on questions of divorce, anarchy, social reform, etc., no American can afford to be ignorant of the power and use of public opinion. The law may set a penalty of death, but public opinion in the group in which a man moves may drive him on to kill a King of Italy or murder a President of the United States. We may laugh at the gowns of our priests and judges, we may poke fun at England for the "red tape" in crowning her King, but if we are wise, we will not discard such things until we are sure that we can substitute something better.

In part three the author gives us a discussion of the shortcomings of social control. If from reading the book so far we have made up our minds that everything can be done by education, provided it is broad and deep enough, part three dispels that notion. After all is said and done there is work for the police and the judge. The author thinks that in society as in school, where there is time and where culture is more to be desired than immediate order, social control is the proper means; but where order must come at once, the swifter and surer work of the police and courts is the better regulator.

If one reads the book to find exact receipts for pedagogical conduct, he will be disappointed. But if one reads the book to get general principles which may be used in many different places under very varying circumstances, he will be well paid for his time and labor.

I think that one leaves the work with the feeling that the last paragraph of the preface expresses. Says the author: "In taking up my task I have had not other thought than to see things as they are and to report what I see. I am not wedded to my hypotheses nor enamored of my conclusions, and the next comer who, in the true scientific spirit, faces the problems I have faced and gives better answers than I have been able to give will please me no less than he pleases himself."

We have many works on Individual Psychology; let us have more on Social Psychology. (\$1.25. Macmillan & Co., New York.)

ARTHUR D. CROMWELL.

Educational Articles in the February Magazines.

- "Political, Economic and Religious Causes of Anarchism," Rev. R. Heber Newton, D.D. *The Arena*
 "The University and the Public," Austin Lewis *The Arena*
 "Boston in Fiction," Frances Weston Carruth .. *The Bookman*
 "Free School Books," Elisha Benjamin Andrews *The Cosmopolitan*
 "A Visit to Mount Vernon a Century Ago; Conversations with Washington," W. M. Kozlowski *The Century*
 "Formative Incidents in American Diplomacy," Edwin Erle Sparks *Chautauqua*
 "Interferences with the Reading Habit," Gerald Stanley Lee *The Critic*
 "James Russell Lowell," William H. Johnson *The Critic*
 "Need of Training for the College Presidency," F. P. Graves *The Forum*
 "Li Hung Chang; a Character Sketch," Gilbert Reid *The Forum*
 "The Care of Dependent Children in Indiana," W. B. Streeter *The Forum*
 "What Shall We Do With the Philippines?" Major John H. Parker *The Forum*
 "Wherein the College Should Help the Mother," James H. Canfield, LL.D. *Good Housekeeping*
 "Novel Entertainments for Children," Anna Wentworth Sears *Harper's Bazar*
 "On the Education of a Child from Eleven to Eighteen—V," Edward Howard Griggs *Ladies' Home Journal*
 "Marconi's Great Achievement," Ray Stannard Baker *McClure's*
 "The Future of China," Isaac Taylor Headland *The Junior Munsey*
 "The Governors of Massachusetts," Alfred S. Roe *New England Magazine*
 "Conditions That Discourage Scientific Work in America," Simon Newcomb, LL.D. *The North American Review*
 "The South is Astir to Improve Her Schools," Charles D. McIver *Success*
 "American Rule is Giving Cuba New Life," Emilio Nunez *Success*
 "Plain Words on Teachers' Wages," William McAndrews *The World's Work*

BIRDS

The first 18 numbers of "Birds and Nature" were devoted to birds and each of the first 12 contain 10 plates, the other 6 contain 8 each. Price of these is 15 cents each. We have reprinted 10 editions of 5000 each of some of these numbers. These early issues always justify themselves and we earnestly urge recent subscribers to order back numbers. See list of color plates on another page.

The 54 back numbers of BIRDS AND NATURE, \$7.50, sent for \$5.00, make it \$6.00 and we will send the magazine for 1902.

Does This Offer Take? Somewhat!

I enclose check for \$10.00, for which you will please send two sets of BIRDS AND NATURE, unbound, to my address.

Cleveland, O., Dec. 20, 1901.

J. H. LAMB.

I enclose P. O. Money Order, for which please send the 54 back numbers of BIRDS AND NATURE, and other goods for Christmas, as follows:

Jacksonville, Ill., Dec. 20, 1901.

STERLING SHAW.

Enclose \$5.00, for which please send the complete set of unbound magazines for five years.

P. BROBERG.

New London, Minn., Dec. 17, 1901.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

JEAN MITCHELL'S SCHOOL

BY ANGELINA WRAY

Supt. L. H. Jones, of the Cleveland, O., public schools, writes:

"I have read and re-read Jean Mitchell's School. The book is a worthy contribution to the school thought and practice of our time. It is concrete pedagogy with life in it. I wish all the teachers in the country, from the first primary grade to the presidents of the great universities, might read it and have its kindly, helpful spirit breathed into them.

JEAN MITCHELL'S SCHOOL is superior beyond all comparison as a story of the *School*. Miss Wray has given us in Jean Mitchell, the teacher pure and simple in the midst of her wonderful work. The drama here unfolded is that belonging to this fundamental institution—the school. The teacher is a real heroine, winning, one by one, the lawless and the churlish among her pupils to a spirit of loving obedience and mutual regard and good fellowship.

This volume of 244 pages shows the growth of the "*Ideal School*" from month to month throughout the year. It is beautifully illustrated with drawings from nature studies appropriate to each month of the school year, and with half-tone pictures of the dramatic scenes. Elegantly bound in cloth. Price, \$1.25 a year.

Ask for our catalogues of Books for Children for
Supplementary Reading and of Books for Teachers.

SCHOOL AND HOME EDUCATION, Geo. P. Brown, Editor, is the foremost journal of the country for the thinking teacher. \$1.25.

— ADDRESS —

The Public School Publishing Company

BLOOMINGTON, ILLINOIS

Just Published

STORIES OF BIRD LIFE

By T. Gilbert Pearson

ONE may go far and not find a more sympathetic observer of birds than Mr. Pearson. He knows birds as few men have known them, and he loves them with a love that warms every word that he writes about them. Moreover, he is a lover, not a maudlin sentimentalist. There is not a trace of mawkishness in any line that he has written. In his effort to translate the thoughts and feelings of birds, he has not given them the thoughts and feelings of people, but he has tried to get

down to the bird nature and to reveal what he really believes to be that nature. It is this, perhaps, which mainly distinguishes his book from so many studies of bird life. We have had enough of fables—of birds pictured as folks in feathers; what we want is the truth about the birds themselves; and whether Mr. Pearson has found this truth or not we cannot feel but as we read that he is an honest searcher after it, and we like him for his honest search.

12mo. Cloth. 236 Pages. Beautifully Illustrated. Price, 60 Cents. Postpaid.

B. F. JOHNSON PUBLISHING CO.

RICHMOND, VIRGINIA.

THE TEACHER'S TOOL-CHEST

No mechanic could get employment as a skilled workman unless he possessed a well-stocked Tool-Chest. Let this catalogue be kept at hand for reference when you find that you need tools in your trade.

Those starred (*) are published in The Standard Teachers Library, and may also be had in manilla at 50 cts. each. Those marked with two stars (**) are in cloth, but may also be had in paper at 15 cts. Those marked with a dagger (†) have been chosen by the State Superintendent for the New York State School Library. Those preceded by (T) are specified for use in New York training classes.

Subscribers to Birds and Nature or Review of Education may order books except Well's Writing Books

from this list at 33 1/3 % discount and they will be sent prepaid. Send all orders to

A. W. MUMFORD, 203 Michigan Ave., Chicago, Ill.

Books of Reference

(T) Sonnenschein's Cyclopaedia of Education, \$3.75.
Knott's Ready Reference Law Manual, \$2.00.
Bardeen's Verbal Pitfalls, 75 cts.
Lawrence's Classified Reading, \$2.00.

The History of Education

† Williams's History of Modern Education, \$1.50.
*† Quick's Educational Reformers, \$1.00.
Bardeen's Dictionary of Educational Biography, \$2.00.
— Note Book of the History of Education, 50 cts.
† Mark's History of Educational Theories in England, \$1.25.
Brenner's Education of Women in Great Britain, \$1.50.
Bennett's History of Pedagogics, 50 cts.
Browning's Short History of Education, 50 cts.
Hailmann's Sketches from History of Education, 20 cts.
Uniform Questions in History of Education, 25 cts.
† Donaldson's History of Education, \$1.00.
Lane's Elementary Greek Education, 50 cts.
† Cadet's Port Royal Education, \$1.50.
Milne's Teachers Institutes, Past and Present, 25 cts.
Grant's Burgh Schools of Scotland, \$3.00.
Stevens's High School of Edinburgh, \$2.00.
Barbera's Educational Publications in Italy, 25 cts.
Bardeen's Educational Journalism in New York, 40 cts.
— Educational Journalism—an Inventory, 25 cts.
Smith's Schools of Syracuse, N. Y., \$3.00.

Descriptions of School Systems

† Zimmern's Methods of Education in the United States, \$1.00.
Page's Graded Schools in the United States, \$1.00.
Bramwell's Training of Teachers in the United States, \$1.25.
Burstall's Education of Girls in the United States, \$1.25.
*† Bardeen's Roderick Hume, the New York Teacher, \$1.25.
— *† Commissioner Hume, a story of N. Y. Schools, \$1.25.
*† Riddle's Nicholas Comenius, ye Pa. Schoolmaster, \$1.50.
*† Grasby's Teaching in Three Continents, \$1.50.
State Education for the People, \$1.25.
Bennett's National Education in Europe, 15 cts.
Arnold's Reports on English Schools, \$2.00.
A Day of my Life at Eton, \$1.00.
† Parsons's Prussian Schools, \$1.00.
— † French Schools, \$1.00.

Biographies of Noted Educators

Bardeen's Dictionary of Educational Biography, \$2.00.
*† (T) Quick's Educational Reformers, \$1.00.
Hailmann's Luther, Bacon, Pestalozzi, Péro Girard, Diesterweg, and Froebel, 20 cts.
*† Carlisle's Memoirs of Ascham and Arnold, \$1.00.
Metkilejohn's Life of Dr. Andrew Bell, \$1.00.

* George Birkbeck, Pioneer of Popular Education, \$1.50.

† Harris's Horace Mann, 50 cts.

Monroe's Henry Barnard, 50 cts.

Portrait of Edward A. Sheldon, for framing, \$1.00.

John Amos Comenius

Portrait of Comenius, for framing, \$1.00.
*† Laurie's Life and Works of Comenius, \$1.00.
The Orbis Pictus of John Amos Comenius, \$3.00.
Butler's Place of Comenius in Education, 15 cts.
Maxwell's Text-Books of Comenius, 25 cts.
Quick's John Amos Comenius, 15 cts.

Life and Works of Pestalozzi

Portrait of Pestalozzi, for framing, 25 cts.
*† DeGuimps's Pestalozzi: his Aim and Work, \$1.50.
† Pestalozzi's How Gertrude Teaches her Children, \$1.50.
— *† Letters on Early Education, \$1.00.
† Rooper's Object Lessons, or Words and Things, 50 cts.
Hoose's Pestalozzian Arithmetics, Parts I, II, \$1.00.

Froebel and the Kindergarten

Portrait of Froebel, for framing, 25 cts.
† Autobiography of Friedrich Froebel, \$1.50.
Letters of Friedrich Froebel, \$1.50.
Hanschmann's The Kindergarten System, \$2.00.
† Shirreff's Kindergarten System, \$1.00.
† Essays on the Kindergarten, \$1.00.
† Marenholz-Buelow's Child and Child-Nature, \$1.50.
† Perez's First Three Years of Childhood, \$1.50.
† Hailmann's Primary Helps, 75 cts.
— The New Education, Vol. VI, \$2.00.
Meiklejohn's The New Education, 15 cts.
Kriege's The Child and Child Nature, \$1.00.

School Law

* Bardeen's Manual of Common School Law, \$1.00.
Johnson's School Law for Training Classes, 50 cts.
Uniform Questions in School Law, Answered, 25 cts.
Code of Public Instruction, New York, \$2.50.
Marble's Powers and Duties of School Officers, 15 cts.
State Education for the People, \$1.25.
Harris's General Government and Education, 15 cts.
Canfield's Rural Poor and Higher Education, 15 cts.
Northrop's High Schools, 25 cts.
Emerson's Latin in High Schools, 25 cts.
Bardeen's Effect of College-Preparatory High School upon Attendance and Scholarship in Lower Grades, 15 cts.
— Continuous Contracts for Teachers, 50 cts.
— Taxpayer and the Township System, 25 cts.
— Problems of City School Management, 25 cts.
Denominational Schools, Discussion of 1889, 25 cts.
Cooper's Compulsory Laws and Enforcement, 15 cts.
Miller's Education as a Department of Government, 15 cts.
The Bible in the Public Schools, \$1.00.
† Karoly's Dilemmas of Labor and Education, \$1.00.

The Teacher and His Qualifications

Ballard's Arrows, or Teaching a Fine Art, 75 cts.
Bardeen's Teacher as he Should Be, 25 cts.
— Teacher's Commercial Value, 25 cts.
— Teaching as a Business for Men, 25 cts.
— *† Teaching as a Business, Four Addresses, \$1.00.
— Continuous Contracts for Teachers, 50 cts.
— *† Roderick Hume, the Story of a N. Y. Teacher, \$1.25.
— *† Commissioner Hume, a Story of N. Y. Schools, \$1.25.
*† Riddle's Nicholas Comenius, ye Pa. Schoolmaster, \$1.50.
Sheely's Anecdotes and Humors of School Life, \$1.50.
Ellis's Tales Told out of School, \$1.00.
Hooper's Fifty Years in the Schoolroom, \$1.00.
*† Northend's The Teacher and the Parent, \$1.00.
Blodgett's Relation of a Principal to the Community, 25 cts.
*† The Teacher's Mentor, \$1.00.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

- *† The Teacher's Critic, \$1.
- *† The Teacher's Guide to Correct Speech, \$1.00.
- * Helps to Self Culture, \$1.00.
- *† Huntington's Unconscious Tuition, 30 cts.
- Hinsdale's Pedagogical Chairs in Universities, 15 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- Gray's Methods and Courses in Normal Schools, 15 cts.
- † Thomas's Dictionary of University Degrees, \$1.00.
- Smith's Honorary Degrees in Colleges, 15 cts.
- † Kay's Education and Educators, \$2.00.
- Sabin's "Organization" vs. Originality, 15 cts.

The Science of Education

- *† (T) Herbert Spencer's Education, \$1.00.
- † Herbert's Lectures and Letters on Education, \$1.75.
- *† Rein's Outlines of Pedagogics, \$1.25.
- ☞ The standard text-book of the Herbartian system.
- † Rooper's "A Pot of Green Feathers", 50 cts.
- ☞ A popular presentation of Herbartian principles.
- Spinoza's Amendment of the Intellect, \$1.00.
- * Patrick's Elements of Pedagogics, \$1.00.
- Williams's Outlines of Psychology, 75 cts.
- (T) Payne's Science and Art of Education, \$1.00.
- *† Tate's Philosophy of Education, \$1.50.
- Uniform Questions in Philosophy of Education. Answered, 25 cts.
- Hinsdale's Schools and Studies, \$1.50.
- Harris's Theory of Education, 15 cts.
- Milton's Small Treatise of Education, 15 cts.
- Harris's Pedagogical Investigation, 15 cts.
- Marenholz-Buelow's School Workshop, 15 cts.
- Gaines's Principles in Teaching, 20 cts.
- Maudsley's Sex in Mind and Education, 15 cts.
- **† Huntington's Unconscious Tuition, 30 cts.
- Education as Viewed by Thinkers, 15 cts.
- Beesau's Spirit of Education, \$1.25.
- Mill's Inaugural Address at St. Andrews, 25 cts.
- Craig's Philosophy of Training, \$2.00.
- Minutes of the International Congress, 1884, \$5.00.
- † Kay's Education and Educators, \$2.00.

Child Study

- McMillan's Early Childhood, \$1.25.
- † Groszmann's Manual of Child Study, 50 cts.
- † Perez's First Three Years of Childhood, \$1.50.
- Tiedemann's Record of Infant Life, 15 cts.

School Management

- *† (T) Landon's School Management, \$1.50.
- * Buckham's Handbook for Young Teachers, 75 cts.
- † Gowdy's Ideals and Programmes, 75 cts.
- *† Page's Theory and Practice of Teaching, \$1.00.
- *† DeGraff's School Room Guide, \$1.50.
- DeGraff's Primer of School Management, 25 cts.
- Batsdorf's Management of Country Schools, 20 cts.
- Gill's Method and School Management, \$1.00.
- Housel's Method of Graded Examinations, 50 cts.
- Wells's Graded Schools, \$1.00.
- Uniform Questions on School Management, Answered, 25 cts.
- Maxwell's Examinations as Tests for Promotion, 15 cts.
- Richardson's Learning and Health, 15 cts.
- Maudsley's Sex in Education, 15 cts.
- Sabin's "Organization vs. Individuality", 15 cts.
- Kotelmann's School Hygiene, \$1.50.

The Art of Teaching

- Fitch's Lectures on Teaching, \$1.25.
- † Fitch's Art of Questioning, 15 cts.
- † Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Hughes's How to Secure and Retain Attention, 50 cts.

- Hughes's Mistakes in Teaching, 60 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Southwick's Quiz Book on Theory and Practice, \$1.00.
- Dime Question Book on Theory and Practice, 10 cts.

School Discipline

- Wickersham's Discipline as a Factor, 50 cts.
- Kennedy's Philosophy of School Discipline, 15 cts.
- Aids to School Discipline, per box, \$1.25.
- Penniman's Suggestions in School Government, 15 cts.
- Briggs's Boys as they are Made, 25 cts.
- Lytleton's Mothers and Sons, the Problem of Home Training, \$1.50.
- Sedgwick's Talks with my Pupils, \$1.00.

Courses of Study

- Emerson's Latin in High Schools, 25 cts.
- Kennedy's Must Greek Go? 50 cts.
- Lees's The Claims of Greek, 25 cts.
- Comfort's Modern Languages in Education, 50 cts.
- Pattee's Literature in the Public Schools, 20 cts.
- Hardeen's Effect of College-Preparatory School, 15 cts.
- McCosh's Essays on Higher Education, 75 cts.
- Northrop's High Schools, 25 cts.
- Canfield's Rural Poor and Higher Education, 15 cts.
- † Harris's Art Education, the true Industrial Education, 50 cts.
- Perrot's Art Teaching in High Schools, 50 cts.
- Gray's Courses of Study in Normal Schools, 15 cts.
- Hinsdale's Pedagogical Chairs in Colleges, 15 cts.
- Harris's University and School Extension, 15 cts.
- Meiklejohn's The New Education, 25 cts.
- Straight's Aspects of Industrial Education, 15 cts.
- Briggs's Industrial Training in Reformatory Institutions, 25 cts.
- Marenholz-Buelow's School Work-Shop, 15 cts.
- The Bible in the Public Schools, \$1.00.
- Hinsdale's Schools and Studies, \$1.50.
- Beck's Graded Question Book, \$1.00.

Methods of Teaching

- Hoose's Province of Methods in Teaching, \$1.00.
- † Fitch's Lectures on Teaching, \$1.25.
- *† DeGraff's School Room Guide, \$1.50.
- *† Page's Theory and Practice of Teaching, \$1.00.
- Lilley's Second Year in School, \$1.00.
- Gowdy's Ideals and Programmes, 75 cts.
- Eclectic Manual of Methods, \$1.00.
- Van Wie's Methods in Common Branches, 75 cts.
- Development Helps, 50 cts.
- Dickinson's Limits of Oral Teaching, 15 cts.
- Barnard's Oral Training, 75 cts.
- † Hughes's Mistakes in Teaching, 50 cts.
- † How to Secure and Retain Attention, 50 cts.
- † Fitch's Art of Securing Attention, 15 cts.
- † Art of Questioning, 15 cts.
- Landon's Art of Questioning, 50 cts.
- Young's Art of Putting Questions, 15 cts.
- Fitch's Lectures on Teaching, \$1.25.
- Kiddle's How to Teach, a Manual of Methods, \$1.00.
- Lind's Methods of Teaching in Country Schools, \$1.00.
- Hart's In the School Room, \$1.00.
- Bates's Methods of Teachers Institutes, 75 cts.
- Fowle's Teachers Institute, \$1.00.
- Uniform Exam. Questions on Methods, Answered, 25 cts.
- Pick's Memory and Means of Improving It, \$1.00.
- Bryant's Teaching of Morality in the Schools, \$1.00.

Natural Science

- Wilson's How to Study Nature in Elementary Schools, 50 cts.
- Gager's Current Errors in Science Teaching, 50 cts.
- † Harris's How to Teach Natural Science, 50 cts.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price: Two cents each assorted as desired; the 488 for only \$4.88; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

- | | | |
|----------------------------------|--------------------------------------|-------------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Turnstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowded Pigeon. |
| 21 Bluebird. | 72 Sora Rall. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbills. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Woodpecker. |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | 147 Bartramian Sandpiper. |
| 47 Indigo Bird. | 98 Snow Bunting. | 148 Nightingale. |
| 48 Night Hawk. | 99 Junco. | 149 Roseate Spoonbill. |
| 49 Wood Thrush. | 100 Kingbird. | 150 Dickcissel. |
| 50 Catbird. | 101 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cineraria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Parakeet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany - (Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 } New England Aster.
Late Purple Aster.
- 348 Wild Yellow or Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 } Fringed Gentian.
Closed or Blind Gentian.
Tall or Giant Sunflower.
- 355 } Black-eyed Susan or Oxeye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowl.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-duck.
- 372 Red-breasted Sapsucker.
- 373 Promethean and Secropian Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinnamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Murrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel.
Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein.
Moth Mullein.
- 424 Medicinal Plant: Cocoa Fruit.

425 Anna's Hummingbird
 426 Rufous Hummingbird
 427 White-throated Sparrow
 428 Parula Warbler
 429 Tourmaline
 430 Indian Elephant
 431 Walrus
 432 Bengal Tiger
 433 Yellow-bellied Flycatcher
 434 Olive-sided Flycatcher
 435 Tree Sparrow
 436 Black-throated Green Warbler
 437 Beryl
 438 African Lion
 439 Alaskan Moose
 440 Polar Bear
 441 Pine Grosbeak
 442 Field Sparrow
 443 Carolina Wren
 444 Black-poll Warbler
 445 Turquoise
 446 Striped Hyena

447 Giraffe
 448 Miriki Spider Monkey
 449 White-eyed Vireo
 450 Rivoli Hummingbird
 451 Worm-eating Warbler
 452 Chipping Sparrow
 453 Topaz
 454 Rhesus Monkey
 455 Asiatic or Bactrian Camel
 456 Zebra
 457 Golden-crowned Kinglet
 458 King Rail
 459 Brown-headed Nuthatch
 460 Sharp-shinned Hawk
 461 Quartz
 462 Greenland Whale
 463 Bur or Spear Thistle and Pasture or Fragrant Thistle
 464 Irish Moss
 465 Blue-headed Vireo
 466 California Thrasher
 467 Broad-tailed Hummingbird

468 Broad-winged Hawk
 469 Quartz
 470 Domestic Cat
 471 Soapwort or Bouncing Bet and Snake-head or Turtle-head
 472 Sugar Cane
 473 Winter Wren
 474 Leconte's Sparrow
 475 Northern Phalarope
 476 Hairy Woodpecker
 477 Opal
 478 Purple Violet and Hepatica
 479 Sheep
 480 English Walnut
 481 Black-chinned Hummingbird
 482 Burrowing Owl
 483 Audubon's Warbler
 484 Red-backed Sandpiper
 485 Garnet
 486 Black Cohosh and Arrow Head
 487 Cows
 488 Sweet Flag

A SET INCLUDING ONE OF EACH OF THE ABOVE

488 PICTURES FOR \$4.88.

Order some of these Pictures for Bird Day and Arbor Day.

A. W. MUMFORD, PUBLISHER,

203 Michigan Ave., Chicago.

BIRDIES.

A real gem. Teachers fall in love with it and pupils want to read it through as soon as they begin it. Appropriate for school and home.

It is the story of the experience of Delma and Harold who went to their grandfather's to spend the summer studying and observing the birds. Contents are:

BIRDIES AT THEIR TRADES: Mason—Swallow, Basketmaker—Crimsonfinch, Weaver—Oriole, Fuller—Goldfinch, Carpenter—Woodpecker, Tailor—Tailorbird.

BIRDIES AND THEIR SONGS: In the Garden—Robin, in the Wood—Thrush, in the Field—Bluebird, in the Sky—Lark, in the Home—Canary, in the Grove—Mockingbird.

BIRDIES ON THE WING: Hummingbird.

THE BIRDIES' FAREWELL: Jack Sparrow and Jenny Wren, Good-bye.

The book is very prettily illustrated by Bertha L. Corbett, the artist of Sunbonnet Babies. The author is Ida S. Elson, of Philadelphia, formerly a prominent Kindergarten of Bethlehem, Pa.

Price: Cloth, 104 pp., 30c.

Special prices for class use.

The Way the Preachers Pray.

Paper 25c. Boards 50c.

An Audacious but Reverent bit of Analysis, published in Book Form. Prayers of Ten Eminent Pastors Dissected.

A short introductory Essay—Prayer in the Light of Modern Thought, by a pastor of one of the best known churches of his denomination.

Short, crisp, keen, kind, careful reviews of each prayer by the author of the introductory statement.

Denominations represented—Methodist, Presbyterian, Universalist, Baptist, Congregationalist, Disciples of Christ, Independent.

"Some new things under the sun have appeared since Solomon's day. The Way the Preachers Pray is one of them.—*Seminary Magazine*.

It is very clever.—Rev. S. G. Smith.

Read it with pleasure and profit.—Elbert Hubbard.

Purpose is laudable; criticisms apt and kindly.—*The Outlook*.

Exceedingly suggestive treatise.—*The Advance*.

Read it with much interest and profit.—Rev. Charles Bayard Mitchell.

Wm. G. Smith & Co., Minneapolis, Minn.

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts.* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? **Telegraph.**—To *Principal W. E. Carhart*, Coeymans, N. Y., March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart*, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To *President Smiley*, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley*, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To *Mr. Carhart*.

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart*, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To *Mr. Carhart*, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart*, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To *President Smiley*, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart*, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To *Mr. Carhart*, March 27.

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

BOUND VOLUMES OF

"BIRDS AND NATURE"

Do you wish to know about the volumes of BIRDS and NATURE? Read these words of praise:

Enclosed find money order for \$8, for which please send me four double volumes, one-half morocco, BIRDS AND NATURE. I shall want Vol. 9 and 10 when complete.

Clemson College, S. C., April 29, 1901.

P. H. ROLFS.

Books received, and I shall want Vol. 9 and 10, in half morocco as soon as they are out. Salt Lake City, Utah, July 7, 1901.

F. A. TIMBY.

Put me on the list for bound volumes as fast as issued. Leavenworth, Kans., May 6, 1901.

PAUL B. JOHNSON.

Hereafter please send me the bound volumes as soon as they come out. Youngstown, Ohio, Nov. 22, 1901.

WM. W. ZIMMERMAN.

I have your letter of the 12th inst., enclosing your bill for \$11.50 for 10 volumes of BIRDS AND NATURE and subscriptions for 1902. I enclose my check covering the bill and beg to thank you for the interest you have taken in my behalf in securing this set of books.

DANIEL LAMMOT, JR.

Philadelphia, Dec. 14th, 1901.

Set of ten Volumes, cloth, - - - \$10.00

Set of five Double Volumes, half morocco, - 10.00

A. W. MUMFORD, Publisher
203 Michigan Avenue

CHICAGO

—PRAISE FOR— BIRDS AND NATURE (\$1.50.)

BIRDS AND NATURE, published by A. W. Mumford, Chicago (\$1.50 per year), is a beautiful magazine devoted to nature study, with birds as the chief attraction. At least four bird-plates printed in natural colors appear in each issue. Birds' eggs, flowers, mammals, fish, insects, fruits, shells, minerals and gems all find a place on its pages. The reading matter is excellent. The magazine should have many readers among children and young people, as it cannot fail to exercise a fine educative influence.—*Epworth Herald*.

Enclosed please find \$3 for **BIRDS AND NATURE** for 1902 and 1903. I cannot get along without it—it is the best on the market.
ALBERT A. BOTT.

Rochester, N. Y., Dec. 17, 1901.

I am exceedingly pleased with the publication—**BIRDS AND NATURE**—it is by far the best of the kind I have ever seen and affords a continual source of amusement and instruction to my family. The monthly numbers are eagerly watched for and mentally devoured.

Brussels, Ont., Dec. 5, 1901.

The **BIRDS AND NATURE** magazine has recently reached the boy and it gives me pleasure to assure you of the delight he finds in the publication.
HENRY L. TAYLOR.

University of the State of New York, Albany, N. Y., Nov. 27, 1901.

Every lover of Nature and Art must commend the beauty and value of **BIRDS AND NATURE**. We eagerly look forward to the arrival of each new copy. BENEDICTINE SISTERS.

School of St. Mary, Winona, Ill., Oct. 20, 1901.

I have been a subscriber to **BIRDS AND NATURE** since it was first issued and like it better than ever.
ENGWARD JEPSEN.

Minneapolis, Minn., Oct. 29, 1901.

A. W. MUMFORD, Publisher,
203 Michigan Avenue, Chicago.

Of Birds and Nature, \$1.50.

A copy of your magazine for January, 1902, I found in our office and it seems to be just the magazine for which I have been looking for some time. You may begin the subscription with the January number if you please.—WM. P. CORNELL, Chicago, Ill., Jan. 17th, 1902.



**THE SMITH PREMIER
OCCUPIES AN
IMPERISHABLE POSITION
IN THE BUSINESS WORLD.**

Unquestioned superior merit annually adds thousands of names to the long list of Smith Premier users, representing every line of trade and every profession. It is held in lasting regard at home and abroad.

ILLUSTRATED CATALOGUE FREE.

The Smith Premier Typewriter Co.
115 Clark Street, Chicago, Ills.

A B C Book of Birds.

By MARY CATHERINE JUDD.

A Book for Children, both large and small, price \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

Mary Catherine Judd has written an A B C book of birds, which contains twenty-six as handsome colored plates of as strikingly plumaged birds as it is possible for the color photographic art to produce. The first illustration is that of a fine specimen of the great bald eagle backed by the American flag. To make the bird fit the first letter of the alphabet it is called, as rightly it should be, the American bald eagle. Among the other birds shown are the gorgeous flamingo, the resplendent cardinal, the ruby-throated hummer, the great diving loon, the familiar meadowlark, and the practically extinct wild pigeon. Miss Judd has given a catching little rhyme with each bird, as well as an accurate prose description of the bird and its habits. The color scheme of both covers is beautiful. The bluejay adorns the front of the book, while the cardinal, as natural as life, lends his beauty to the back. No better child's book can be found.—*Chicago Record-Herald*.

The "A B C Book of Birds" is designed for children, large or small, with nonsense rhymes for little ones and prosy sense for older ones. Every letter in the alphabet is represented by a bird, beginning with the American bald eagle and ending with the zoo-zoo, or mourning dove. There is a jingle for each bird and the author then tells in prose some interesting facts about the bird represented. The book is an instructive as well as pleasant one for children, who can learn therefrom many things about birds. The same publisher has issued a very attractive bird calendar for 1902, which sells for 50 cents.—*Utica Press, New York*.

Photographs of birds in natural attitudes and colored in exact imitation of the real colors of the feathers, and combinations of colors peculiar to our wild songsters, are the features which recommend the "A B C of Birds" to the little folks. It is hardly enough to say that the pictures reflect life, for they are so remarkably good. Mary Catherine Judd, the sponsor of the book, has written nonsense rhymes for the little ones and prosy sense for older ones. The paragraph intended for the grown-ups gives the Latin and common names of the bird, something about its habits and its home. The nonsense rhyme begins with the letter of the alphabet, and jingles the words together in a way which children love to hear.—*Chicago Evening Post*.

This "A B C Book of Birds," as its title indicates, is a volume treating of birds, and primarily intended for children. The order of the alphabet is followed in the selection of birds for description. Thus the letter A represents the American bald eagle, B the bluejay, C the cardinal grosbeak, and so on throughout the alphabet.

The descriptions are in rhymes of from one to five stanzas, easily comprehended and memorized by the child. Each of these descriptions also acquaints the child with some of the most prominent characteristics of the bird described. Moreover, each description is accompanied by a full page illustration of the bird described, the illustration faithfully reproducing the form, coloring, and, whenever possible, the size also of the bird.

For children this volume is not only exceedingly attractive but also instructive. At the same time that the alphabet is being learned the memory is being exercised as the rhymes by repetition are being committed, and the rhymes almost unconsciously familiarize the child with the principal characteristics of the birds described.

And the book is not without its adaptation to older people, for each illustration and child's rhyme is followed by a page paragraph giving a more technical description for maturer intellects.—*Denver Post*.

For the very little ones Miss Mary Catherine Judd has prepared, and A. W. Mumford of Chicago has published, "The A B C Book of Birds." The illustrations in color are marvels of the lithographer's art, presenting the various birds in all the brilliancy of their coloring, and in surroundings, as to color, true to life. Each illustration is accompanied by a few lines of verse for the child, while on the opposite page is a paragraph in prose giving the scientific name of the bird and a few lines of scientific information about them which will help the grown-ups to explain the pictures more intelligently to the little ones.—*Minneapolis Journal*.

A. W. MUMFORD, PUBLISHER,

203 MICHIGAN AVE., CHICAGO.

The Song Budget Music Series.

\$1.50 PER DOZ., \$10 PER HUNDRED.

1. **The Song Budget.** Paper, small 4to, pp. 76, 15 cts. Leatherette, 25 cts.
2. **The Song Century.** Paper, small 4to, pp. 87, 15 cts. Leatherette, 25 cts.
3. **The Song Patriot.** Paper, small 4to, pp. 80, 15 cts. Leatherette, 25 cts.
4. **The Song Budget Music Series Combined,** containing all three of the above in one volume, with opening exercises for schools added. Cloth, small 4to, pp. 260. 50 cts.

The distinguishing features of the Song Budget Music Series, of which nearly half a million copies have been sold, are these:

- 1st. To give a good deal for the money.
- 2d. To give only the best music.
- 3d. To give music just as it was written.
- 4th. To give only songs that are strong.

The Sentence Method of Teaching Reading. By GEORGE L. FARNHAM. Cloth, 50 cts.

As the word method was a step above the alphabet method, so the sentence method is a step beyond the word method. "The unit of thought is the sentence," and if the child considers the words as units in learning to read, he must unlearn his habits of reading in order to read naturally. Mr. Farnham shows how much more easily children will learn to read, and how much better they will read, where this method is employed. The book is in general use all over the country; extensively used in Chicago the past year.

OLD STORIES RETOLD

With 59 Original Illustrations. By PAUL BINNER. Boards, 16mo, pp. 64. 25 cts.

It is no longer a question whether children shall read fairy tales. The Graggrinds have been silenced, and it is admitted that something else besides "facts" shall enter into the education of children. So the question is now how these fairy tales may be most attractively presented to the child, and surely never before have they appeared in more enticing dress.

EDUCATIONAL GAMES

Historical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards, 2¼x3¾ inches. 50 cts.

The cards contain 500 questions and answers, and afford a most interesting as well as profitable game for home and school.

Geographical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards 2¼x3¾ inches, 50 cents. Similar to Historical Game.

THE GAME OF INDUSTRIES

Is an educational game consisting of 100 cards and 400 questions and answers on the great industries of our country. 2¼x3 inches, 25 cts.

LITERATURE GAME

By A. W. MUMFORD. 500 questions and answers on English and American Literature. 100 cards, 2¼x3 inches, 25 cts.

SPECIAL OFFER.

The Four Games to One Address Prepaid for \$1.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

Chicago.

A Few "Ifs" for Teachers...

IF you have to teach **MUSIC** in your grade,
IF you have to teach **DRAWING** in your grade,
IF you would like a set of model lessons in

**READING,
ARITHMETIC,
GEOGRAPHY, ETC.**

get **American Education**, in the current numbers of which is an excellent and practical series of lessons on these subjects.

A SAMPLE COPY FREE.

**NEW YORK EDUCATION COMPANY,
81 CHAPEL ST., ALBANY, N. Y.**

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

70 Fifth Avenue, New York City.

352 Washington Street, Boston, Mass

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—BIRDS AND NATURE one year and a complete set of these Trees for only \$2.00.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Does This Offer Take? Somewhat!

Your offer came to me some time ago, but I was unable to avail myself of it until now. However, I wish my subscription to begin with the October number and I think that it will amount to the same thing. I also wish the three sets of typical Forest Trees in photogravure. I enclose the \$2 for the magazine and the pictures.

MABEL REED BENWAY.

N. Towanda, N. Y., Dec. 17, 1901.

Enclosed please find \$2 for BIRDS AND NATURE and a complete set of Forest Trees.

OLIVER H. HAM.

Portsmouth, N. H., Dec. 20, 1901.

Enclosed please find check for BIRDS AND NATURE one year and a complete set of Trees for the Staples Schools.

H. L. WALDRON.

Staples, Minn., Dec. 11, 1901.

A. W. MUMFORD, Publisher.

**EDUCATIONAL REVIEW, \$3.00 } BOTH,
BIRDS AND NATURE, 1.50 } ONE YEAR, \$3.50**

"We find the EDUCATIONAL REVIEW absolutely indispensable at every turn."—Michael E. Sadler, Director of Special Inquiries and Reports, Board of Education, London, England. September 13, 1901.

"To men like myself it is a sort of working library. Its volumes stand always at my elbow."—Professor Paul H. Hanus, Harvard University.

"The EDUCATIONAL REVIEW gains in strength monthly. I value the work as highly as any educational work I have among some thousand books."—Fred W. Atkinson, Superintendent of Public Instruction, Manila, Philippine Islands.

"It is difficult to see how the EDUCATIONAL REVIEW could be made more essential for us teachers and executives."—President Charles F. Thwing, Western Reserve University, Cleveland, Ohio.

"I have been a subscriber to the REVIEW since it started, and hope to continue—well, not until it ends, but until I go out of education and teaching."—Will S. Monroe, State Normal School, Westfield, Mass.

"The broadest and most able of the American periodicals devoted to education."—*New York Times*.

"An educational magazine of which the teaching profession may well be proud. There is nothing better in educational journalism in any country, and it has an editor who has convictions, and the courage of them."—*School and Home Education*, Bloomington, Ill.

"The REVIEW has from the first issue taken its place at the head of American periodicals devoted to education. It is, indeed, the first educational paper in America to win for our country the respect of educationalists abroad."—*Journal of Pedagogy*, Ypsilanti, Mich.

A. W. MUMFORD, 203 Michigan Avenue, Chicago.

—\$4.20 FOR \$2.10—

Another Combination Offer that Means Something.

BIRDS AND NATURE one year	\$1.50	} ALL FOR \$2.10
*Ten Back Numbers BIRDS AND NATURE	1.50	
60 Colored Pictures from BIRDS AND NATURE.....	1.20	
The total amount of value.....	\$4.20	

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"It is one of the most beautiful and interesting publications yet attempted in this direction. It has other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little magazine abundant prosperity."—*Chas. R. Skinner, State Supt., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."—*Dr. Elliott Coues*.

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial reception."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls of my rustic retreat, 'Slab Sides.'"—*John Burroughs*.

"When one considers the low price at which you sell *BIRDS*, the number and excellence of the plates are surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of **BIRDS AND NATURE** may be substituted for the ten back numbers.

A sample of this magazine and of *The Review of Education* for a dime and two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these :

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man—what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. THE REVIEW OF EDUCATION contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. THE REVIEW OF EDUCATION does not seek to compete with its contemporaries, but rather to supplement them all.

2. **N. E. JOURNAL OF EDUCATION ;**
Weekly; \$2.50 a year.

Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monroe, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.

3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**

Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.

4. **MODERN METHODS; \$1.00 a year.**

Our New Monthly.

The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.

5. **THE SCHOOL BULLETIN; \$1.00 a year.**

THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

Standard Literature for Schools

A Series of Choice Books for Class Reading and School Libraries.

AMERICAN HISTORY.

		List Price.	
		Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years.	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years.	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse Show Robinson (Kennedy), No. 10	For 6th and 7th Years.	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years.	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years.	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years.	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years.	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years.	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulwer-Lytton), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years.	.20	.30
Rob Roy (Scott), No. 3	For 6th and 7th Years.	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

FRENCH, SPANISH AND ROMAN HISTORY.

Alhambra (Irving), No. 4	For 6th and 7th Years.	.12½	.20
Last Days of Pompeii (Bulwer-Lytton), No. 38	For 7th Year	.20	.30
Ninety-Nine (Hugo), No. 18	For 7th Year	.20	.30
Peasant Prince (Martineau), No. 41	For 6th and 7th Years.	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (1st Moore and School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (Foe), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Rot (Wyss), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne) (4 stories), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

Black Beauty (Sewall), No. 31	For 5th and 6th Years.	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years.	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years.	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years.	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years.	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years.	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete.	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text.	.12½	.20
Evangeline (Longfellow), No. 21	Full Text.	.12½	.20
Five Great Authors No. 42	Each Selection Complete.	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems.	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text.	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text.	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete.	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11		.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete.	.20	.30
Silas Marner (Eliot), No. 43	Complete.	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text.	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete.	.20	.30

University Publishing Co., 27 W. 23rd St., New York City.

Educ P 127.1

THE REVIEW OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. NO. 8.
WHOLE NUMBER 70.

CHICAGO, MARCH, 1902.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment.....	281
Hugo—His Centenary and his Interesting Childhood, Kenyon West.....	286
The Public Library: Its Purposes and Possibilities, William H. Brett	288
The Future of Women Teachers, Dr. A. E. Winship	292
Why Children Break Down in School, Philo F. Chase	296
The Mission of the Kindergarten, Sarah L. Arnold	297
The Evolution of "The Children's House," Boston, M. H. Burgess.....	299
The Evolution of a School Yard, Susan Huntington Hooker.....	302
Discipline, Clarence F. Carroll.....	303
School Rivalry, J. B. Mowry	304
Freedom in the High School Course, Prof. Edwin G. Dexter.....	305
The Des Moines Geographic Exposition.....	310
Educational Statistics of States and Leading Cities.....	312
Book Reviews	317
Educational Articles in the March Magazines	320

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
303 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$3.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

CALIFORNIA GOLD. Now is the time to make it by buying and selling real estate. Our clients are doubling their money in a few weeks. If you have idle money to invest (any amount) write for full particulars. We guarantee you against loss and your money may be withdrawn at any time. For 25 cents we will send you a handsomely illustrated California magazine (100 pages monthly) four months on trial. **MERCANTILE INVESTMENT CO., 604 Byrne Bldg., Los Angeles, Cal.**

Industrial Pictures.

Size 6 x 9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,

203 Michigan Ave.

Chicago, Ill.

FOR 75 CENTS

We will send the following three games to one address, prepaid. Or any one game sent upon receipt of price.

LITERATURE GAME, by A. W. Mumford. 500 questions and answers on English and American Literature. 100 cards, 2¼ x 3 inches. Price, 25 cents.

GAME OF INDUSTRIES. 400 questions and answers on the great industries of our country. 100 cards, 2¼ x 3 inches. Price, 25 cents.

GAME OF BIRDS. Illustrations of popular birds in colors, true to nature, on 52 finely enameled cards, 2¼ x 3¾ inches. Makes the identification of our birds simple and positive. Price, 35 cents.

These games are so interesting and instructive you'll certainly enjoy them. Just what you have been wanting for the school and home. Each game enclosed in case, with full directions for playing. Address

A. W. MUMFORD, PUBLISHER.

203 Michigan Ave., Chicago.

Beautiful Pictures, Catchy Verse

The Jingle Book of Birds

By EDWARD B. CLARK

16 Colored Plates

Price 60 Cents

ADOPTED FOR TOWNSHIP LIBRARIES IN
WISCONSIN

This book is for both Children and the elders. The
lines are not jingles merely but jingles which have
a well rounded purpose and much of pith and point.
The color scheme of the cover is strikingly beautiful.
This book will make an appropriate Christmas gift.

Read what the Chicago Record-Herald critic says of the book :

"The Jingle Book of Birds," by Edward B. Clark, has the triple merit of being handsome, clever and reliable. Mr. Clark is one of the most thorough and enthusiastic ornithologists in Chicago, and has for years been a contributor to magazines and to the local press on the subject of birds. Instead of writing the customary "alphabet" he has preferred to be guided by the real nature of the birds, rather than by the letter with which each name begins, and has treated only those birds of which something pointed could be said. There are sixteen spirited "jingles" and the same number of full-page colored illustrations of typical birds, the pictures being unusually fine examples of three-color work. The book is an excellent one to put in the hands of children. Here is an example of Mr. Clark's jingles, taken from the one devoted to "the bluejay, a rascally thief," which closes thus:

It is queer how the people have made it a rule
That to call a man "jay" is to call him a fool,
For if they believe that the jay is a dunce
They'll find themselves fooled if they try him just once."

—Chicago Record-Herald, Nov. 23, 1901.

The Chicago Evening Journal says, after quoting from the jingles at length:

"Sixteen beautiful illustrations in colors—magnificent full-page picture—show the varied and wonderful plumage of some of Mr. Clark's feathered friends. Opposite each picture is a descriptive verse in big type. For children or young folks, or even for adults. 'The Jingle Book of Birds' is a very pretty possession. Mr. Clark deserves to be complimented on producing such a dainty and pleasing volume."

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago,

Birds of Song and Story

By ELIZABETH AND JOSEPH GRINNELL.

16 COLORED PICTURES.

PRICE, ONE DOLLAR.

There is a charm about the writings of both of these authors that will appeal strongly to all lovers of good literature, and especially so to all who love at once to read the printed page and the book of nature.

"Birds of Song and Story," by Elizabeth and Joseph Grinnell, contains a series of interesting sketches of the habits and peculiarities of birds. Appropriate poetical quotations relating to different songsters, written by well-known poets, are scattered through the volume. Many anecdotes, personal observations and historical references enrich the sketches. The work is especially written for children, using simple language and a pleasing style of diction likely to hold the attention of the reading boy or girl. The illustrations are excellent, being colored photographs of birds in natural surroundings in the grass, trees or beside the nest. The coloring is true to nature and an acquaintance with the pictures will aid the child in identifying the birds in the trees.

Please send me 5 copies of Birds of Song and Story, Grinnell, by express; 45 copies fast freight.

J. S. GLASSCOCK.

Pasadena, Cal., Nov. 29, 1901.

Adopted for Township Libraries in the State of Wisconsin.

A. W. MUMFORD, Publisher,
203 Michigan Avenue, Chicago, Ill.

- - The Children's Hour - -

A Song Book for the School and Home, by Frank L. Sealy, Conductor of the Newark Madrigal Club, Accompanist for Walter Damrosch in the New York Oratorio Society, etc.

A NEW SONG BOOK

With arrangements from Abt, Schumann, Reinecke, Mendelssohn, Fesca, Peel, Gade, Gluck and others; melodious songs of pronounced carrying, wearing and singing qualities, quickly learned, and easily within range of children's voices. Over 5,000 used in the Newark Public Schools.

Cloth. 175 pp. Price, 50 cents.

MORE PICTURES IN NATURAL COLORS.

In addition to the 488 beautiful plates in colors true to nature which have appeared in Birds and Nature, we have printed the following, size 7x10, suitable for framing.

Two cents each; the twelve for 20 cents.

1001 Gold-finch Tanager, Indigo Bird.	1007 Red Fox.
1002 Ruffed Grouse.	1008 Lioness and Cubs.
1003 Wood Duck.	1009 Holland Water Scene.
1004 Gray Squirrel.	1010 Lake Steamer.
1005 Geyser — Old Faithful.	1011 Skating Scene.
1006 Golden-eyed Ducks.	1012 Mammoth Cave.

Large pictures in the colors of nature. Price, 25 cents each or the 3 for 50 cents, postpaid. All suitable for framing.

1201 Golden Pheasant, life size 18x24 inches.

1202 Song of the Lark (Breton) 18x21 inches.

1203 Gladstone, the Grand Old Man, 18x24 inches.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

BIRDS OF LAKESIDE AND PRAIRIE

===== \$1.00. =====

"Edward B. Clark of Chicago has made some exceedingly critical observations on 'Birds of Lakeside and Prairie,' and the same have been embodied in a book published by A. W. Mumford (Chicago-New York) sixteen handsome illustrations in color accompanying the text. Mr. Clark presents the bird life of the lakesides and prairies of the Middle West in a charming way, and invests them with an individuality as a strongly marked as Thompson-Seton gives to his wild animals."—*New York World*, Dec. 21, 1901.

It has been a matter of wonder to many why some bird lover did not do for the Middle West what Borroughs and Torrey have done for New England and the eastern seaboard. A modest beginning has been made in this direction by a little book, 'Birds of Lakeside and Prairie,' written by Edward B. Clark, a local writer. Mr. Clark knows birds and loves them, and it is to be hoped that his little book will meet with such success as will justify him in putting out a more ambitious book in the future. The chapter titles of the book, attractive as they are, do not hold out false hope, and he who reads 'Birds of a Smoky City,' 'In Southern Hoosier Hills,' 'Spring on the Kankakee,' 'On the Trail of Pokagon,' will wish to know more of one who can write so charmingly of our feathered friends. There are a large number of fine colored pictures of birds."

Adopted for Township Libraries in Wisconsin.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

CHICAGO, ILL.

————— \$4.10 FOR \$2.00 —————

A Combination Offer That Means Something.

BIRDS AND NATURE (one year).....	\$1.50
REVIEW OF EDUCATION (one year).....	1.00
GAME OF BIRDS.....	.35
GOLDEN PHEASANT (Colored Picture).....	.25
LITERATURE GAME.....	.25
GAME OF INDUSTRIES.....	.25
TWENTY-FIVE PICTURES (From Birds and Nature).....	.50

ALL FOR ONLY

\$2.00

The total amount of value\$4.10

BIRDS AND NATURE——Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by color photography. It is the only periodical in the world which publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"Certainly no periodical, and probably no book, on birds ever found anything like such favor with the public as **BIRDS AND NATURE**."—*Evening Post, New York*.

REVIEW OF EDUCATION——An educational review of reviews.

GAME OF BIRDS——Illustrations of popular birds, in colors true to nature, on 52 finely enameled cards 2½x3¼ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

GOLDEN PHEASANT——A beautiful Picture for framing. Printed in natural colors on fine paper 18x24 inches.

LITERATURE GAME——500 Questions and Answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

GAME OF INDUSTRIES——Educational—400 Questions and Answers on the great industries of our country. 100 cards, 2½x3 inches.

REMEMBER——A year's subscription to **BIRDS AND NATURE** and **REVIEW OF EDUCATION** alone amount to \$2.50. If you now take either magazine, or both, your subscription will be advanced one year.

A sample of both magazines for a dime and two pennies—12 cents in stamps. Send for Catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

We all admire **Birds and Nature**, both for its fine pictures of animal life, and the stories and descriptions of them.

Empire, Colo.

FRED NELSON.



Birds and Nature keeps well up to its standard. I have taken it from the start and can only give the highest praise to all your work.

New York City, Jan. 30, 1902.

J. W. BARSTOW.



Enclosed please find \$1.50 for **Birds and Nature** for the present year. We thought we would not take it this year, but we like it so much, we do not like to do without it.

Salem, N. J., Feb. 14, 1902.

M. E. LAWRENCE.



I enclose \$1.50 for my subscription to **Birds and Nature** for the year ending December, 1902. I thank you for sending the magazine right along, as I desire every number. It is a grand magazine.

Rahway, N. J., Feb. 21, 1902.

JOHN W. SALING.

Beautiful Bird Calendar

→ FOR 1902 ←

This is the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

This is an exquisite bit of color work. Each of the six pages of the calendar (9½x12½) has upon one side a beautiful picture of some bird—the owl, bluebird, warbler, red-headed woodpecker, passenger pigeon and blue jay—while on the reverse side is a full, authentic, interesting description of the bird. Each bird is not only colored to life, but the pose and surroundings are equally true to life.—*Journal of Education*.

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

I enclose \$4.88 for which send us a full set of the 488 Birds and Nature plates in natural colors.

Evansville, Wis., March 1, 1902.

H. F. KLING, Supt.

Enclosed find check for subscription for another year. Sufficient to say that I would not be without my "Birds."

Fertile, Minn., Feb. 12, 1902.

G. J. DEMARS.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modelling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity of terms, opportunity for measurement, etc.

125 Illustrations. 108 pp., 5½x8½ in. 75 cents.

A. W. MUMFORD, Publisher, - 203 Michigan Ave., Chicago.



Gosport, Ind., Feb. 28, 1902.

I wish to congratulate you on your new magazine. Personally I am very sorry to see the "Child-Study Monthly" and "Proceedings of the Illinois Society for Child-Study" disappear. But if they have to go, it is a pleasure to have so valuable a magazine as "The Review of Education" take their place. Such a review as you are publishing will be very helpful to teachers and all interested in education.

OSCAR CHRISMAN.



An Extraordinary Offer!

A YEAR'S SUBSCRIPTION

—TO—

The Birds and Nature

AND TO

The Review of Education

TOGETHER,

FOR \$1.75.

Instead of the regular price, \$2.50.

A. W. MUMFORD, Publisher,

203 Michigan Ave., - Chicago

Greatest of all Tonics
Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—
Invigorates the Entire System.

Review of Education One Year
—AND—
50 Colored Plates of Birds, Animals, Plants, Etc.
...\$1.50...

I think your magazine **BIRDS AND NATURE** is the best magazine I ever saw and I have gathered many points of knowledge on bird life from it.
Livermore, Ia., Feb. 23, 1902. **GERALD B. THOMAS.**

**NEW SUPPLEMENTARY
R E A D E R S**

SEND FOR LIST.

FOUR OLD GREEKS—By JENNIE HALL, *Instructor in History in the Chicago Normal School.* Cloth, 224 pages; for introduction, 35 cents.

CHILD STORIES FROM THE MASTERS—By MAUD MENEFER. Cloth, 104 pages; for introduction, 30 cents.

CLASSIC MYTHS—By MARY CATHERINE JUDD, *Principal of the Lincoln School, Minneapolis.* Cloth, 208 pages; for introduction, 35 cents.

NORSE STORIES—By HAMILTON WRIGHT MARIE. Edited by Katherine Lee Bates, *Professor of Literature in Wellesley College, Wellesley, Mass.* Cloth, 275 pages; for introduction, 40 cents.

A CHILD'S GARDEN OF VERSE—By ROBERT LOUIS STEVENSON. Illustrated by Miss Mars and Miss Squire. Cloth.

THE SUNBONNET BABIES' PRIMER—By EULALIE OSGOOD GROVER. Illustrated in colors by Miss Corbett. "the Mother of the Sunbonnet Babies." Cloth.

**Rand, McNally & Company
Publishers**

Chicago New York London

The Psychology of Childhood

By **FREDERICK TRACY,**

Lecturer in Philosophy in the University of
Toronto.

With Introduction by **PRESIDENT G. STANLEY HALL,** of Clark University.

Cloth, 186 pages. Retail price, 90 cents.

This is the fifth edition, revised and enlarged. It contains a new chapter on the moral, religious and æsthetic education of children. The book is of unique interest to the philologist and the psychologist, as well as to the teacher.

Send for complete descriptive list of
Heath's Pedagogical Library, 37 volumes.

D. C. HEATH & CO., Publishers

Boston New York Chicago

The Review of Education.

VOL. VII.

CHICAGO, MARCH, 1902.

No. 8.

EDITORIAL COMMENT.

The death of Col. Francis Wayland Parker deprives the educational world of one of its most brilliant and energetic men. Professor Parker died suddenly Sunday afternoon, March 2, 1902, at Pass Christian, Miss., where he was seeking renewed health which had been broken by overwork. His whole life had been spent in the hardest of brain work. His ideas, always promulgated freely, are known in every civilized country. With voice and pen he began a crusade against the old methods of education. He looked upon the child as a problem to be studied and developed, rather than a receptacle into which was to be poured the limited contents of a school curriculum. All nature was his text-book and from personal contact with animal and plant life and the wonders of the inanimate earth the pupil was to receive his knowledge. Abstract studies came as deductions.

For seventeen years Professor Parker had been a prominent factor in the educational life of Chicago. From 1885 to 1889 he was the head of the Cook County—now the City—Normal School. He then became president of the Chicago Institute, founded by Mrs. Emmons Blaine. In 1900 the institute became a department of the University of Chicago. Here he was given full liberty to develop his doctrine, "Study the child and let the child teach itself through interest." Here he placed the child and its activities before any formal rules or traditions of the old-time schools. It was his aim to de-

velop the physical and moral side as well as the intellectual side of the child's brain.

President Harper has said of Professor Parker: "He was one of the ablest educators in the country and one of the strongest and most brilliant teachers. He was a man of remarkable vigor and striking characteristics, and contributed largely to the upbuilding of the school system."

Professor John Dewey, in a eulogy delivered before the senior college students, used these words: "Colonel Parker was above all things a whole-souled man. He was one of the most complete human beings in the blending of ideas and in his enthusiasm that it has ever been my fortune to meet. His work in the field of education was that of a missionary and apostle. Like the great apostles he was fired by intense moral enthusiasm. I have heard people who, in giving him credit for being a great educator, believed that his work was chiefly that of development of educational machinery and devices. It was in part this, of course, but more than this, it was a work done in the faith that in giving the child the highest education possible he was accomplishing the most he could for humanity. No one before him, except possibly Horace Mann, saw that the cause of the public schools and the country was really one. He was a firm believer in the idea of educational democracy."

The scant recognition accorded in this country to the man of pure science as distinguished from the man of practical invention has been of late the subject of some comment, and it is true that the American scholar has to contend against difficulties much greater than those that exist abroad. There is certain ground for encouragement, however, in another aspect of the case. Although the American university seems to condemn most of its professors to a round of drudgery which is likely to preclude original research, the American people seem more and more inclined to call upon those professors for services in which they appear prominently before the public, and as the result of which they can earn that general recognition which they have the right to covet.

President Schurman, of Cornell, for instance, was placed at the head of the first Philippine commission; Dean Worcester, of the University of Michigan, was a member of that commission and is also a member of the administrative body which has succeeded it; Professor Moses, of the University of California, is now a colleague of Dean Worcester's; Professor Hollander, of Johns Hopkins University, was made Treasurer of Porto Rico when the United States government instituted the civil administration of the island and drafted the revenue law now in force; David Starr Jordan, now president of Leland Stanford University, was for many years the scientific adviser of the United States fish commission and was appointed United States commissioner in the Bering Straits fur seal controversy; and, perhaps as the last notable honor paid to the universities, Seth Low, of Columbia, was elected Mayor of New York.

Other illustrations might be given, but these are enough to indicate the high place that men of scholarship are coming to hold in the public mind. Meanwhile, even those university professors and presidents who do not enter political or public administrative life receive a larger share of general approval and confidence. Men like Eliot, of Harvard; Hadley, of Yale; Angell, of Michigan, and Northrup, of Minnesota, exercise an influence which is by no means confined within the limits of their respective universities. The

president of a large institution of learning occupies a position of wide influence. What he does is everywhere noted, what he says is everywhere discussed. The prominence which is given even to the casual silly remark of a university professor in his classroom indicates the interest that the public takes in the university professor's opinions.

With these things in mind, one cannot say that the universities are a neglected and disregarded part of American life. On the contrary, they have now an influence which is both wide and deep, and if the policy recently outlined by President James, of Northwestern, be carried out in its full consequences, the great American university will every year find itself more intimately connected with the events and tendencies of the present day. There will be no estrangement between the universities and the people. Rather will the university draw closer to the people and the people make a continually larger use of the learning of the university.—*Exchange*.

Last year the sum of \$100,000 was given to Columbia University for the purpose of endowing a chair for instruction in the Chinese language and literature. The professorship was offered to Minister Wu, but he was unable to accept. The university has finally secured Dr. Herbert Allen Giles, of Cambridge University, to fill the chair. It would seem that no better appointment could have been made. Professor Giles is the foremost living authority on Chinese matters. "He has done more to popularize the study of the people, their characteristics and their literature than any other European scholar of our day." The establishment of this professorship has not escaped the notice of the Chinese government and its foreign office is sending to the university a valuable gift of books. This "is a collection of over 6,000 volumes covering every branch of Chinese literature, both ancient and modern. It

is said to be the most comprehensive collection of books ever made in China, and was begun in the seventeenth century by a commission of scholars appointed by the emperor, Kang Tsi. Modern scholars have brought it up to date on the plan originally laid out."

This new department at Columbia is an important addition to the educational advantages of our country. It will be possible for students to obtain not only a practical knowledge of the Chinese language, but they may also study the civilization of that ancient people. The endowment and the gift of books "may be the means of impressing our people with a profounder appreciation of the Chinese character and intellect and of our discovering that we have much to learn from them."

Dr. Gunsaulus, President of the Armour Institute of Technology, in a recent sermon spoke from the text, "He that hath ears to hear let him hear." His theme was the independence of manhood as taught by the great thinkers Hugo and Doré. He said: "Both had precious gifts of expression. Hugo expressed in words what Doré expressed in pigments. Doré was not large enough to make Hugo's blunders. Hugo heard and understood the moan of the submerged classes. Millet had more of faith than Hugo or Doré. Millet's man with the hoe is not Edward Markham's man with the hoe. Millet's man with the hoe expresses all the joyousness and largeness there is in nature—all the broadness of God's love. While Victor Hugo was the biggest political failure of his age, no other man in France could write a ballad that would sing itself so into the heart."

In an address on "The Church and Higher Education" President Harper, while speaking of freedom of speech, condemned the action of the authorities of

any institution who attempted to curtail the researches of professors because of their beliefs and because they published the results of their researches. Dr. Harper said:

Such an institution will not long remain a university. The university has no more right than the State to restrict the research or the promulgation of the results of such research. The university is a modern institution. Previous to 1870 there was no university, the higher educational institutions being colleges. Our curriculum then was wholly of the past. Latin was the great essential and English was hardly recognized and the study of modern literature was excluded entirely. The changes have been so great in recent years that it can hardly be called evolution, but revolution. The course of study in the high-schools of today is better than that of most of the colleges of the past and of many of the poorer colleges of the present time.

In the course of his address at a recent meeting of the Chicago teachers, Professor William McAndrews, of Brooklyn, criticised the authorities of Chicago for the low wages paid to the instructors in its public schools. He said:

Shame on you, Chicago, who once entertained the nations of the world, and known now as the city that cuts down the paltry stipend of the trainers of its sons and daughters! Down with this so-called business system of running the schools! It's all folly. You can't buy teachers that way. When a race-track man wants to get the best work from a thoroughbred he feeds him lots of good grain. The minimum wage for any teacher is the sum that will maintain her in the best physical and mental condition. The poorest teacher in the system ought to have that amount.

The superintendent-general of education for Cape Colony believes in the kindergarten. In Cape Town an exhibition of drawing, painting, needle-work, and woodwork is held each year. Next year kindergarten work done by children and by kindergarten students and teachers will be included. Articles will be shown illustrating toy-making, straw-plaiting, cane-weaving, ball-making, rug-weaving

and the more familiar branches of kindergarten work. There will be an exhibit of flower-pot stands, small screens and picture frames, "showing the uses to which kindergarten work may be put."—*Atlantic Educational Journal*.

One of the significant instances showing that English is becoming more and more the real universal language is that at the congress of tuberculosis in London almost all the foreign delegates spoke English, and spoke it well. The Danish, German, Italian, Belgian and Swiss delegates talked eloquently in English, some of them with so little trace of accent or of foreign idiom as to surprise their English hearers. As the language of science and diplomacy, as well as that of commerce, it will soon distance all its rivals, whatever they may be.—*The Pennsylvania School Journal*.

Dr. Samuel M. Lindsay, of the University of Pennsylvania, has been appointed to succeed Dr. M. G. Brumbaugh as Commissioner of Education to Porto Rico. Dr. Lindsay is a graduate of the University and pursued a graduate course in Europe. For some time he has been the assistant professor of Sociology at his Alma Mater. He is an earnest student and his investigations have eminently fitted him for his new field of labor. By virtue of his office he will be a member of the Senate of Porto Rico, of the Supreme Board of Health and of the Governor's Council.

In an address delivered before conference of educators recently held at Simla, the Viceroy of India made this pointed statement: "What is the greatest danger

in India and what is the source of suspicion and of superstitious outbreaks and crime—yes, and also of much of the agrarian discontent and suffering among the masses, is ignorance, and the only antidote to ignorance is knowledge. In proportion as we teach the masses, so we shall make their lot happier; and in proportion as they are happier, so they will become more useful members of the body politic."

It has been announced that the University of Chicago has secured the necessary funds for the establishment of a new department—a school of law and jurisprudence. There is no doubt that the faculty which will have charge of this school will be composed of the best available law lecturers who will be required to devote all of their time to the work. Dr. Harper says that the courses in this school will be open to students graduated from universities, or who have taken three years of undergraduate work.

The Harvard-Princeton debate will be held at Cambridge, March 26. The following question has been submitted by Harvard: "Resolved, That Mayor Low should strictly enforce the excise laws of New York City." Princeton will send an unusually strong team and will make every effort to win the victory, for in all the years of intercollegiate debating she has not been able to defeat Harvard.

In order to create a greater interest in debating a new system is to be tried at Harvard. "Each of the four class clubs will hold three debates a month, and each club will choose by vote the best speaker in these debates. The three men so chosen will then form a class team to debate with a similar class team. The two winners of these class teams will then debate for interclass supremacy."

Dr. Charles H. Gilbert, head of the department of zoölogy of Leland Stanford University, will soon sail on the United States steamer Albatross to Hawaii, where he will have charge of the interests of the United States fish commission. He will be the leader of a party of scientists who will make investigations in all branches of natural history.

Dr. John Dewey, professor and head of the department of philosophy and education in the University of Chicago and the director of the Dewey school for children, has been mentioned as the probable successor of Colonel Parker as director of the School of Education.

Dr. Charles J. Judd, head of the department of pedagogy and professor of psychology at the University of Cincinnati, has accepted the appointment of head of the department of psychology at Yale. Dr. Judd is a graduate of Wesleyan and received his doctor's degree at Leipsic.

The *Journal of Education* in its issue of February 20, 1902, began the publication of outline biographies of a large number of well known educational men and women. These biographies will form an interesting and valuable contribution to educational literature.

Through the courtesy of the American Book Company, we are enabled to publish, in this number, the valuable tabulated educational statistics of States and leading cities for the seasons of 1900-1901. These plates are from the School Calendar for 1902.

The annual meeting of the Eastern Commercial Teachers' Association will be held in Temple College, Philadelphia, March 27, 28 and 29. This meeting will afford an excellent opportunity for the examination of the unexcelled historical, industrial and educational features of that city.

HUGO—HIS CENTENARY AND HIS INTERESTING CHILDHOOD.

BY KENYON WEST.

Victor Hugo, whose centenary came on February 26, was one of the most striking personalities of the nineteenth century; many-sided, versatile, ardent in his political and social beliefs, touching life at many points, and getting so close to humanity that its very heartbeats could be heard. Charles Reade thought him the one great genius of the nineteenth century. Coppée called him the greatest lyric poet of all ages. Swinburne extolled him to the skies. Many of the leading critics of Europe said that his death left a larger blank in the ranks of literary men than had been left by any man since the death of Goethe. And this in spite of the fact that contemporary French criticism had been somewhat hysterical, both in its praise and its blame. Contemporary criticism is apt to be unduly affected by the overwhelming popularity of a man or by the exacting claims of the questions agitating the public mind, and which find expression in the man's works. It lays undue stress upon the importance of the passing moment.

It was a stirring time in which to be alive in France—the years between 1802, when Victor Hugo was born at Besançon, and 1885, when he died at Paris—and his life as citizen, politician, social reformer, and literary artist must be studied in detail in order to take the full measure of the man. It would scarcely be possible to overestimate the importance of his work, what he did for French poetry, for French romanticism, for the cause of democracy, and for the welfare of the poor and the oppressed. His works have many structural faults; he was often misled by his erratic and excitable imagination and his extremes of opinion; he was not wholly free from the defects and limitations which seem inseparable from the French nature, but all he wrote was warmly glowing with life, vital with earnestness, instinct with passionate fervor.

"If a book," said Carlyle, "comes from the heart, it will contrive to reach other hearts; all art and authorcraft are of small account to that." The deep and crushing woes, the great passions of men and women, appealed with power to Victor Hugo, and with power he treated them. And because he touched humanity so closely, his best dramas, lyrics, and romances are considered masterpieces. Lacking this warmth of sympathy with life his work with all its splendor of style, its vivid imagery, its unrivaled skill in description, and its lyrical charm would be neglected and pass into oblivion, but the best of it has taken a permanent place among the world's treasures. It will withstand the shocks of time, the disintegrating force of the swiftly passing years. All portions of Victor Hugo's varied career are of interest, highly dramatic, and picturesque—his early struggles to gain recognition from the Academy; the masterly victories he won for the romantic drama—the great battle against the old order of things beginning with the preface to "Cromwell," in which, as George Sand said, he gave the watchword to the dramatic revolution, and ending with the production of "Hernani," a battle which won for the cause of romanticism a victory whose influence is felt still; then his political services to his beloved France, his long exile, his return in 1870 to become the idol of the people, his later years filled with honors and adulation, the heroism and beauty of his death, the almost regal pomp of his burial.

All the circumstances connected with the writing of his books, the occasions which produced his famous satires, the domestic sorrows which gave rise to many of his sweetest lyrics—all these are of interest. But no adequate tribute to his genius can be given here.

At this centennial time it is a pleasure to forget Victor Hugo's faults and to re-

member him at his best, and Hugo at his best was very great, indeed—he had many gracious and beautiful qualities of mind and heart. It is a pleasure to remember his many beautiful and gracious deeds.

There is one portion of his life and one phase of his character to which I wish to refer—his picturesque and eventful childhood and his absorbing love for children. "Many of his lyrics seem set to the music of children's voices and laughter." As in the days of old "out of the strong came forth sweetness," so from this poet of storm and battle, this cloud-compeller whose words often boom and reverberate like thunder, so from him when childhood was his theme have come some of the gentlest, most tender of human words. He never seems to think of the little folk without a mental caress. His thought smiles to them. His fancy seems to make himself a child in their company. His sympathies are keenly wrung by their sorrows. With a master's hand he has touched the strings that vibrate to the song that tells of the grief that came to him when his own children were taken from him. An enthusiastic critic has said that the whole loveliness of childish ways was not seized till Victor Hugo wrote. His lyrics gain in interest when we know that they are many of them transcripts of personal experience. Then his group of poems called "*L'art d'être Grand-père*" are about his own beloved grandchildren, Georges and Jeanne, who gladdened his later years. Louis Blanc said that he himself witnessed many of the scenes described so vividly and tenderly.

Victor Hugo was profoundly influenced by his birth and parentage—are we right when we speak of birth and parentage as accidents?

His father, as we know, was an officer in Napoleon's army; his mother was an ardent Royalist. General Hugo said: "The child thinks with the mother; the man will think with the father." That mother had a strong nature, and she was in her way as much of a fighter as her husband. The doctors declared that the baby could not live, he was so weak; the mother declared that he would and must live, and she carried the point; she won the victory. The child lived, lived to out-

grow his natural delicacy, and to die at the serene age of eighty-three.

He was but six weeks old when he was taken to Marseilles; then his babyhood was filled with wandering from station to station, "in the wake of a wandering military father."

In 1805 General Hugo was with the army of Italy. Mme. Hugo had been with her husband in Elba, Corsica and many places, but now she returned with her little family to Paris. General Hugo did such good service in tracking the famous brigand Fra Diavolo and in bringing him to justice that he was rewarded with the governorship of Avellino, so about 1807 Mme. Hugo set forth to rejoin her husband. What a journey the family had through France, in a lumbering old diligence; then in a sledge through the snows of the Mount Cenis Pass, then in a diligence once more through a country picturesque and beautiful, and through scenes of novelty and charm; yes, and through dangers and horrors! The sensitive imagination of the little child never got over the impression of these horrors. He always remembered the bodies of executed brigands which hung at frequent intervals along the roadside.

Another picturesque journey was to Spain after Joseph Bonaparte had been made king of that country, and he had taken his faithful Hugo with him. Spain was to Hugo what Italy was to Goethe, says one his biographers. On his deathbed, when his mind was wandering, he talked in Spanish, and referred to many scenes of long ago in his far-away childhood. When his mother found it best to return to Paris, the journey through the Pyrenees and all the incidents of it remained in his memory as of wonderful charm.

As with Margaret Fuller, so with Victor Hugo—there was an old garden which was teacher, consolation, and a source of endless delight. This garden of the Feuillantines was "more than a garden," says Marzials. "It was a park, a wood, a piece of the country dropped into the midst of the great city, a place of enchantment where magicians might weave their spells, and monsters lurk in the secret places and knights and ladies wander at will and everything unforseen

and unexpected happen quite naturally." In this place of wonder and of charm the three brothers passed many happy days under the guidance of their wise mother. "Through life," says one of his admirers, "Victor only loved a garden where

birds, flowers, and trees were left to their own devices." Victor always called this garden of the Feuillantines one of the teachers of his youth.—*New York Times Saturday Review*.

THE PUBLIC LIBRARY: ITS PURPOSES AND POSSIBILITIES.

BY WILLIAM H. BRETT.

Those who are working for popular education and the betterment of social conditions are again indebted to the Commissioner of Education, who includes in his last annual report a chapter devoted to the statistics of public libraries in the United States. The rapid and greatly accelerating growth which is shown to have taken place since the report of five years ago, in the number of libraries reporting, the number of volumes which have been added, and the work the libraries are accomplishing, comes as a surprise even to those who have been most interested in watching the development of the library movement.

In view of this evidence of material prosperity, and the prominence which has in the past few years been given to the public library, it may not be unprofitable for us to consider what the public library of the present day stands for; what is its aim and purpose; what the place it holds in the civic life of this day, that cities should so readily assume its support; what the meaning of the opportunity it holds which makes it appeal so forcefully to the philanthropist, not only as a means of enriching the daily life of the people, but of giving to the student the means of making individual research, by furnishing the rare and costly collections which are necessary for such work; in short, to consider to what the public library has already attained, and to discover, if we can, to what larger things the spirit which has been moving so mightily in these latter days may be leading us.

The function of the public library is to supply books, for purposes of both entertainment and information, to its readers.

It aims to supply the best books to the largest number. It seeks not only to supply the needs of the individual reader, but to supplement all other educational forces of the city and to aid any effort which is made for its good. In its educational work, the city library of to-day parallels the schools, from the kindergarten to the university, and goes beyond the latter in its services to the advanced student and investigator.

The children's rooms in our libraries know no age limit, and welcome the youngest children that are able to use books, or even to enjoy pictures; showing them that a book may be to them a source of delight, rather than a task, and soliciting their interest in its proper care and handling. Each important subject, as history, biography, travel, science, poetry, and even political science, ethics, and religion, is represented by books suitable for younger readers; and this collection is catalogued, classified, numbered, and arranged in a manner similar to that of the main collection. If in addition to this, as is often the case, the holders of juvenile membership cards are allowed to use the main collection, when the time arrives that their membership is transferred to the general circulating department, they are not coming upon unknown ground, but are entering a territory with which they may have already made themselves acquainted, and in which they will find familiar landmarks and guides. The curricula of the public schools are carefully studied, and books which will aid the pupil in enlarging the subject, broadening his horizon, and deepening his interest, are plentifully supplied—the books recommended for col-

lateral reading being, of course, included in the number.

The education of the individual in the schools and beyond, is comprised in three periods, as follows:

First: That of acquisition alone, in which the text books are descriptive, little more than statements of fact, and the work mainly that of memory.

Second: That of comparison, in which truths and facts are placed in relation to each other and interpreted; the work of the reason and of judgment. The two are not separated by a definite line, the work of acquiring knowledge going on still in the second stage.

Third: That of investigation and original research, whether under the auspices of an institution, or independently. In this the student uses the knowledge already acquired as stepping-stones to discovery in realms still unknown.

In the first stage the library is of value by broadening and presenting in a more attractive way the facts of the text books. As the pupil passes gradually into the second stage, of comparison and interpretation, the value of the library becomes greater, and its use essential to any full understanding of the relations of the subjects under consideration. For work in the third stage the library, the storehouse of all human knowledge, is indispensable. He who would reach out and pluck treasures from the unknown in any field, must first master and plant himself firmly upon that which is known. Dr. Gilman, in describing the function of a university in conserving knowledge and promoting investigation, has happily said that "Libraries and museums are the dwelling places of universities."

While the library is thus the handmaid and helper of the school throughout the entire course, and is the workshop of the advanced student, the investigator and explorer, it has a function of even greater importance for those whose opportunities for education do not go beyond the public schools, and a function which no other institution can so well perform; that is, to continue the education for good citizenship that is begun in the public schools. To the large number—to the great majority of our boys and girls—who leave school at the age of fourteen or fifteen, when they are just ready to

enter the high school, whose work in school has been largely that of learning the art of reading and of storing their memories with elementary knowledge, whose work has been almost entirely in the first stage of education—to these the public library must be high school, college, university; it must give to them the only opportunity they are likely to have of broadening and increasing their knowledge, of properly relating and interpreting the facts of nature and of life, and making their knowledge a consistent whole instead of a mere collection of isolated facts. This is an additional and still more weighty reason for training children in the use of the library from their earliest schooldays; as, in addition to its immediate advantage in their school work, it will make them acquainted with that institution which must be their main reliance in continuing their education beyond the period of their school life; and having once tested its usefulness in answering the questions of the schoolroom, they will more readily turn to it for assistance when confronted by the larger problems of life.

The library is in touch with every phase and interest of human life, and may be helpful in all. To the man or woman who is merely breadwinner or homemaker, it offers practical suggestion and helpful information from its store of books on the various arts and handicrafts. In addition to the many books on practical matters which are of general interest and in demand always and everywhere, every library should consider the business interests peculiar to its location—as shipbuilding, manufactures, mining, agriculture—and should provide itself with the best literature upon these subjects, to the great practical benefit of those engaged in these occupations. It is a fact that certain towns in this country which have good technical libraries have attained pre-eminence in certain manufacturing industries, largely due, I believe, to the fact that the library had quietly, year after year, supplied to the workman the best books upon his special work, and thus enabled him to come to his daily task with more exact information and with greater intelligence; and in this way the libraries have yielded to their cities direct financial re-

turns for the outlay. It is a fact also, to which the records of public libraries generally will bear witness, that books on house-building, home-making, the care of children and of the sick, the household arts and elegancies, are in large and constant demand; and while it is not possible to measure the results of their use, it is fair to assume that they are doing a great deal toward the making of more comfortable and happy homes. The tendency of the reading habit is toward economy and thrift. A taste for books restrains from unprofitable, expensive, and harmful amusements, and arouses interest in the things that are better worth while. The reading of books for entertainment merely, within reasonable bounds, is a pleasure which is followed by no disagreeable recollections.

The library is not only a direct aid in the arts of life to the individual, but is also helpful in public affairs. The pedagogical department of a city library is the library of city school teachers, and their use of it renders it exceedingly valuable to the work of the schools. That department which deals with public questions—such as highways, sewers, lighting, car service, police, sanitary and fire protection—is a practical library of information for the municipal authorities upon subjects that are of the greatest importance to the welfare of the city; and also gives to the private citizen an opportunity to form an opinion as to the conduct of city affairs. Indeed, there is no phase of the work of the library which is of such importance as that of affording to all of our citizens, and to the boys and girls who are preparing for citizenship, an opportunity to fit themselves for their civic duties. An American citizen is called upon to express, at the voting booth and elsewhere, an opinion not only upon municipal questions of vital importance, but, in the wider realm of state and national politics, he must decide upon questions of foreign policy, upon great economic problems upon which the prosperity of the country largely depends, which are complex and difficult and should have careful study. The departments of sociology and history should be of great value to the thoughtful citizen. While the public library cannot lend it-

self to the propaganda of any particular school of opinion, it is the arena into which all opinions worthy of consideration may enter with the assurance of fair presentation. The public library has already become an important factor in the political education of our citizens, and there are wonderful possibilities for greater development along this same line.

Thus far I have only spoken of the economics and social value of the library as an aid to the citizen and the city in material interest and in civic duties. But beyond this is its use in the enlarging, the uplifting, the sweetening of the individual life. I need not argue this; we all recognize the value of good books to the human soul—of the opportunity they give us of communion with the masters, of realizing the permanent, the eternal, the worthy. Wordsworth has said:

"There is
One great society on earth,
The noble living and the noble dead."

It is not given to many of us to commune familiarly in the flesh with those who are recognized as standing pre-eminently above their fellows; but we may from the shelves of our library choose at will our intimate companions from the greatest and noblest of all time, and we may in the solitude of our own rooms commune with them as with familiar friends. A great man once said:

"But when evening falls I go home and enter my study. On the threshold I lay aside my country garments, soiled with mire, and array myself in courtly garb. Thus attired I make my entrance into the ancient courts of men of old, where they receive me with love, and where I feed upon the food which only is my own and for which I was born. For four hours' space I feel no annoyance, forget all care; poverty can not frighten, nor death appall me."

This realm is the heritage of us all; but for many of us, for most of us, indeed, the only way to approach lies through the open alcoves of the public library.

So far as the public library lies parallel to the primary and secondary work in our schools, it receives its support in the same way and for the same reason; namely, that it is educating the younger generation for the duties of citi-

zenship. The same claim may fairly be made for all library work, on the ground that whatever helps a man to do his work more ably and honestly, and to earn a better living for his family—whatever enables a woman to make a home in which grace and comfort and elegance shall be more abundant—and whatever instructs them both as to their social relations and civic duties, is beneficial to the state. And the same may be said with almost equal truth of the range of library work which is general and popular; for whatever makes a man better informed, broader in his views, and contributes to his happiness and contentment, will tend to make him a better citizen. The city which spends thirty dollars a year on the elementary education of each of its school children can well afford to spend one dollar per year for each in support of a library to enable them to continue their education.

It is only when we come to that higher range of library work which meets the needs of advanced students and original investigators, which involves the purchase of expensive collections to be used by comparatively few people, that a practical question arises as to how far the municipal tax-supported library should go. I said a *practical* question, for there can hardly be a doubt as to the right of providing for higher education at public expense. We have in its favor the authoritative opinion of the fathers of the Republic, and of some of its greatest statesmen, from Washington to Edward Everett. We have precedent in the great state universities, which, under the fostering care of the state and by its support, are doing a wonderful educational work. But with the municipality it is not a question of theoretical right, but of ways and means. Our city libraries are usually supported by taxation, and receive only a small fraction of the amount levied for municipal purposes. In one city with whose work I am familiar, and which received rather a larger part of the levy than in most cities, this proportion of the municipal levy devoted to the library is about one and one-half per cent of the whole. This proportion seems small; but in the great pressure for improvements which are essential to the growth of the city, and for protection,

and with a burden of taxation already heavy, it is not easy to see how any considerable increase can fairly be made in the levy for library purposes. This is the condition in most of our rapidly growing cities. And in most of them the demand for books to be used in connection with the school work, or of immediate value along the other lines I have indicated, is much greater than can be met. In this condition it is difficult for the public library to devote any considerable part of its funds to the purchase of books for the use of advanced students; although it may recognize clearly the value of such work, and may see that it does ultimately yield benefits to the community.

The need of adequate housing for libraries, of buildings which shall be convenient and dignified and beautiful, and which shall be built amply enough to supply the wants of future generations, is being met by state and municipal appropriations and by magnificent private gifts. During the year ending July 1, 1901, about \$19,000,000 was given to the libraries of the United States, of which sum the larger part was given expressly for the erection of buildings. With this want supplied comes the need of larger collections of books; a need which, when it is fully understood, we may hope to see met by endowments for the definite purpose of supplying book funds. The building logically comes first; for, unless a library has a home which is commodious and convenient and reasonably secure from loss by fire, it cannot hope for any considerable addition to its collections by gifts. If it is fortunate enough to have a building which is not only ample and safe, but beautiful and dignified, its attraction for the donor is still greater. After the building is supplied, the most urgent need is for more books, for larger collections, both for the special student and for popular use. The noble gifts which have been made within the past few years give us reason to hope that when these needs of the library are understood, they will be met in the same generous way.

A study of the reports of our city libraries from year to year shows that the collections are not being increased as largely as is necessary to do the work

which should be done, owing to lack of funds; and the testimony of librarians in public libraries generally will be that the demands upon their libraries are much greater than they can meet. An adequate supply of books is of no less importance than a noble building. And this is a perennial need; it cannot be met sufficiently by a single gift, but rather by vested funds which shall provide for

additions regularly from year to year. Side by side with the name of him who provided the building will be the name of him who endows the institution with ample book funds, and thus continuously and cumulatively increases its educational power, its influence for social betterment, for generation after generation of readers in all the years to come.—*The Dial*.

THE FUTURE OF WOMEN TEACHERS.*

The headlight of the locomotive moves no faster than the red light on the rear platform, though one is a glorious announcement of the approaching train and the other a faint and weird acknowledgment that the train has not gotten beyond that point. The headlight is always in touch with the red light. The one is as important to the safety of a train as the other. It is as serious a matter to be telescoped as to telescope. Of course there is more poetry in lighting the reflector than the lantern, but it is no more important.

Every invention and discovery affects the social system, and the more intense the progress, the more sensitive is the whole social organism. The spider spins the thread and coils it before he spreads it out as a web, and it is always a part of himself. He is strongest when he is at its center, for he feels the slightest wavering motion of the outmost thread. There is nothing accidental in a system. It is always spun and coiled within some central thought, and more and more the educational system is to be the center of American life. When the system is universal from the rural and elementary schools through the secondary school and the State university to the one worthy National university, then American life, domestic, social, industrial and commercial, will be spun and coiled within the school, and spread out as a web of elaborate and perfect social order, with the educational ideal at the center. The university commencement, with its hoods

and gowns, is no more important than the morning when the poorest little urchin creeps timidly into the sub-primary school of the slums. A Marconi catching the faintest flutter of a signal shot out over a wireless sea is of less significance than the six-year-old child in some primary schoolroom today who will give the world some invention as far beyond Marconi's as his is beyond Cyrus W. Field's serpentine cable. There are a thousandfold more wonderful things in germ in the elementary schools of today than are being discovered by all the men in the laboratories of the world.

If, as Loeb says, death is a germ and not decay, and if that death-germ can be, and must be, sterilized in the embryo, then the elementary school teacher has a thousandfold greater responsibility, both for the life and the death-germs, intellectual, moral and physical, than has the university expert.

The teacher is at the center of the great social network, and the faintest wavering of the outmost thread of the social web touches her sensitive soul with a warning of new responsibilities.

Every advance in the social, industrial and commercial system intensifies education. The ideal for generations was a seven years' apprenticeship at a trade in which a man worked all his life. Later it was a four years' apprenticeship, with less certainty that he would stick to his trade. Now it is a convenience which one heeds or not as he chooses. In Boston within fifteen years there were horse-

*Address by A. E. Winship, of Boston, before the Chicago Teachers' Federation, February 15, 1902.

cars threading the streets and suburbs. Men handled the lines and brakes who were not highly educated, who had not learned a trade. About that time came the introduction of the trolley, and these horse-car drivers were invited to go to an evening school, provided by the corporation, and study electricity, and most of these men were able to learn how to take the motor end of the car. During the past year there has been introduced a most intricate third-rail elevated subway department, with a new and highly complicated system of signals. An evening school was at once established, and the trolley motormen were invited to learn the new system and operate it. Now there are men handling a very difficult and highly specialized electrical system who were horse-car drivers fifteen years ago. This is merely a sample.

When the great strike was on in the steel mills last summer, the management did not try to break the strike by starting the mills, but they devoted themselves to educating men who had been in inferior positions so that they could take the places of high-priced specialists, and in three months or thereabouts they would have had men ready to do the work skillfully. This effectually and promptly broke the strike.

The schools are to train young people to be sufficiently vigorous, poised and alert to adapt themselves to whatever comes their way in the matter of promotion. No one can imagine what a young man may be called upon to do ten years after he enters upon the work of life.

This, then, is the situation: A marvelous pace in American progress; the schools preparing those who are intensifying this progress; a demand for greater vigor, better poise and a higher degree of alert adaptability to intricate industrial and commercial conditions.

All our young people are in school eight years for an elementary preparation for the great race upon which they enter. One-third of these take two, three or four years of advanced work that they may have special preparation for the struggle for success, and fully a third of these latter take four years more for scholarly advantages in the keenest of these contests.

Most of those who take only the eight

years' elementary course must be content therewith because they are unable, or think they are unable, to get any more or better education. Two-thirds of the successes of life, social, industrial and commercial, will come to the one-ninth who spend more than ten or twelve years in school. Nine-tenths of all the successes will come to the one-third who spend more than eight years in school. The great mission of American educators is, then, two-fold: first, the inspiration of as many as possible of the two-thirds to extend their school course; and second, to give to each child in this two-thirds the noblest possible preparation for increasing the chances of his success in life with the limited education that he has.

Regarding these children in the elementary schools, more than 95 per cent of the teaching in cities and large towns is done by women, and more than 95 per cent of the administration and leadership is by men. In school boards, in supervision, in making courses of study, in the selection of school books, in deciding upon the length of the term and of the day, in establishing rules, in the management of educational associations, and in the selection of teachers, men have 95 per cent of the influence. What does this signify?

In the first place, it does not signify that woman is to be advanced by the retirement of man. It will be a calamity to women as well as to men, to the country as well as to the child, if men lose absolute influence to any degree. There is abundant honor for all in the grand and glorious conquests of scholarship and character foreshadowed in the revolution for which I plead. Nor do I plead for the rights of woman. The rights are those of our country and of the child.

Why do the women have less than 5 per cent of leadership and more than 95 per cent of labor? Because women are supposed to be specially adapted to obedience—as per the marriage vow—to the execution of details, and to other phases of service, and because they are not supposed to have the wisdom, the discretion, the energy, to plan and to administer.

Who have formed this judgment upon which rests the decision of 5 per cent of leadership and 95 per cent of labor for women? Why, the men, of course. The

5 per cent men have done the thinking for the 95 per cent women. To say the least, the situation is highly interesting—to the women. If the judgment of the men regarding the judgment of the men concerning the lack of wisdom, discretion and energy of women is correct, then some interesting questions arise.

What reasons do the men assign for their estimate of women? They have given no specific reasons. They assume it. They do, however, say that there should be a larger percentage of men teachers because boys need the masculine mind; that is, the masculine mind says that boys need the masculine mind. I have been guilty of saying that myself. It is refreshing to a man to say it. Now I decline to accept it without some other evidence than a man's luxury of thus glorifying himself. In the meantime, while men are preparing their case, one proposition may be considered.

If boys do need the masculine mind, then they should have all they need of it. If they need it at all, they need it from eleven years of age upward, and it is a national disgrace and a crime against humanity that 95 per cent of the teaching in elementary grades is by women. If this assumption is true, then the men should teach the boys, and the women should do the overseeing. There is no argument in the masculine mind idea that accounts for the women's having but 5 per cent of influence.

It may be that boys reverence leadership and not masculinity. A child study enthusiast gave a series of questions to American children, one of which was: "Who is your highest ideal of success, or, whom would you prefer to be or to have been?" Washington or Lincoln was the general choice. The same question in England brought for an answer Queen Victoria. This was as true of boys as of girls.

Assuming, then, for argument's sake that what boys reverence is leadership and not masculinity, and assuming, which is undoubtedly true, that 95 per cent of the teaching in elementary schools will continue to be done by women, is it not a logical conclusion that women should be given an opportunity to be leaders, to reveal to the boys their capability of lead-

ership, and opportunity to inspire in boys a reverence for themselves as leaders?

What we need is a committee to make a study after the plan of the Committee of Ten as to these points:

First. Does the masculine mind need the masculine mind or merely great leadership?

Second. If the masculine mind reverences leadership, how can the 95 per cent of their teachers be given an opportunity to reveal the power of leadership or to develop greater power?

Of course such a committee should consist of equal proportions of men and women. It would be cruel to suggest that 95 per cent should be women on the ground that 95 per cent of the acquaintance with schoolboys is feminine.

While we await the appointment of such a committee, it may be allowable to make a few unclassified remarks.

First. The time has gone by—it went with the passing of the twentieth century—when it makes any appreciable difference, primarily, whether one be a man or a woman. Prejudice of that kind got badly sidetracked in crossing the boundaries between the centuries. The supreme court of Illinois was just as attentive to the women representatives of the Chicago Federation of Women Teachers as it was to the mighty men who represented the men of the corporations.

The woman who represents 90 per cent of power will accomplish more in the twentieth century than the man who represents but 70 per cent of power.

Second. Inactivity does not breed vigor in professional or public life any more than it does in an arm that is carried in a sling. Traditions, prejudices and practices have sadly promoted inactivity in school women. If women teachers are to be leaders, if boys are to understand that their women teachers are capable of leadership, then they must lead in the same arena as men. They must lead among men and not merely among women.

Third. The men will not intentionally and gracefully welcome women to rank with them in leadership. That would not be human nature—man's nature. The public has seen jackets and trousers planning and directing, bossing and drawing the large salaries so long that the pre-

sumption is that jackets and trousers are entitled to these luxuries, and the burden of proof that it is not so is with the women, and this is no easy proposition.

A story is told of a woman in the London underground railway who was so fleshy that she moved slowly, and she had an infirmity which required her to get out backwards, and each time when she got about half way out, the guard, supposing that she was trying to get in, gave her a boost and shut the door, shouting, "All aboard." She was carried round five times. Then, instead of trying to get out, she stood in the door and made the guard understand that she proposed to get out, and he must stand aside and give her a chance. Isn't it about time that the 95 per cent of the teachers of 70 per cent of all the children of America should say to the men who have hustled them off the platform for so many years, that it is time to hold the train till they are on the platform?

Fourth. There is to be an educational awakening akin to a revolution, and as a result there will be for teachers a higher social recognition, adequate salaries, and a substantial pension plan. The profession, and the country behind the profession, suffer more than is suspected from the fact that the teachers of America's children have limitations to their efficiency, which must be removed before they can be the leaders that the young people of the twentieth century need. There must be an end, a speedy end, to the habit of joking in prose and verse about the schoolmaster and the schoolma'am. We had hoped that Nicholas Nickleby had gone to his long rest, when lo and behold, "Emmy Lou" steps before the footlights hand in hand with the "Tragedy of the Kindergarten," much to the humiliation of the profession.

There are, and there will always be, weaklings in the schoolroom as in all other spheres of life, but it is a crime against the children and against our country to hold up to ridicule the whole profession because among the third of a million teachers—one-half of whom receive less than 75 cents a day for their year's work—there are those whom a caricaturist can make appear ridiculous. In all of the third of a million teachers there is scarcely one who does not regis-

ter some evidence of noble devotion and genuine affection for the children, and many of these are among the noblest of the world's workers. The educational papers, some of them, recognize this noble service and endeavor to glorify teachers, but almost every magazine writer and contributor to other periodicals think it only clever to ridicule "English as she is taught," and to magnify as absurdly as their ingenuity can suggest the frailties of the profession. There are vast numbers of noble women who will not teach school simply because they will not join the ranks of those who are so universally humiliated. This will cease as the twentieth century advances. Beyond this negative social advantage there will be positive social improvement for teachers, notably for women.

With the twentieth century there will also be adequate salaries, especially for women teachers. I say adequate and not merely higher salaries. Massachusetts ranks high in matter of salaries. Practically she leads the procession of States in this regard, and yet outside of Boston, and five cities and towns nearby, she pays her women teachers less than \$1.75 a day by the year. In most of these communities a nurse gets \$3 a day and board, a dressmaker receives the same, and the woman who scrubs floors or does washing gets \$1.50. The woman teacher cannot occupy the position which is indispensable to her leadership of children on about half the wages of the dressmaker and nurse.

At least one-third of the teachers of Massachusetts, despite her leadership in salaries, receive only about \$1 a day, by the year! State Superintendent N. C. Schaeffer, of Pennsylvania, recently called attention to the fact that in that State there were several counties in which the teachers are paid less on the average than the county spends for each of its paupers.

Not less important than the adequate salary is some pension plan that makes provision for whoever cannot longer do the best work in the schoolroom.

Finally, woman, who has suffered most from want of social recognition, from inadequate salary, from lack of a pension plan, is likely to furnish the leaders in the revolution that will bring her all this.

In any revolution those who suffer most produce the leaders. It is Jacob Riis, who suffered unspeakable anxiety from lack of opportunity and means, that is leading New York City out of the slums into breathing places and recreation piers. It is Booker T. Washington, born in a floorless cabin and toiling a friendless negro in a mine, who leads his race to higher thinking and better living. So it is likely to be women who will lead the woman teacher into the recognition, the pecuniary returns and the provisions for age and infirmities, without which life cannot be satisfactory.

Woman's recognition will come when she achieves something worth while. Who

of Chicago educators has had the most invitations to speak before large audiences from the Atlantic to the Missouri during the past four months? It is not President Harper, the prince recipient of royal gifts, nor Professor John Dewey, the ingenious psychological pedagog, nor Arnold Tompkins, the ethical artist among educators, nor Colonel Parker, the most regal of educational enthusiasts, but rather Margaret Haley and Catherine Goggin, whose achievements fascinate the world. When two grade teachers stepped forth from their classes, with their writ of mandamus, they became leaders worthy a place beside the noblest of the land.—*Journal of Education*.

WHY CHILDREN BREAK DOWN IN SCHOOL.

By PHILO F. CHASE,

Berwyn, Ill.

Some of our leading journals have called attention to the fact that many school children are crowded forward in their studies beyond their strength and are being compelled to drop out of school. While these papers state a good many facts, they have all failed to give the correct reason for the failure or to suggest a remedy.

Our public school system is not at fault and the teacher is not to blame if the child suffers physical collapse while trying to keep up with the class. The trouble is in the early physical development of the child and in the failure to build a firm foundation of brain and nerve energy upon which to build a mental superstructure in school days. The tardy development had its origin in babyhood, and during all those years when the child played round the house before it had reached the school age its physical culture was neglected. To try to educate a child without any physical preparation is like building a house upon the sand.

All that babies require to keep them in a healthy, growing condition is food, sleep and exercise; their exercise is just as necessary as their food and sleep. To assimilate their food and have restful

sleep they must have exercise. Many babies begin to have indigestion as soon as they change from mother's milk to prepared food, and as a consequence their brains are not supplied with their daily portion of rich blood. When the child's food is not properly assimilated the brain is the first part of the body to suffer. When a child's brain is half starved on impoverished blood for four or five years in infancy you have reason to expect the child to get nervous and suffer physical and mental collapse in school.

Creeping is nature's own preventive of indigestion and the baby should not be weaned before it has learned to creep. A bloated and enlarged stomach is the first indication that the baby is not assimilating its food. Then if the baby's appetite is increased and the food supply is increased malnutrition will soon be developed. Nature intended that all babies should creep and creeping is a cure-all for many of the defects and deficiencies of babies.

Any mother who has raised a good sized family of children will tell you that a baby who is a lively creeper will not have a hard time cutting teeth. A lively creeper is always a good digester and a

good sleeper and plenty of sleep is a preventive of nervousness in children.

The three great enemies of childhood are indigestion, malnutrition and retarded development.

Hygiene has done much for the baby's relief, but hygiene is not enough. It needs the assistance of physical culture during the period of infancy. Infantile physical culture increases the digestive powers of the child so that the child gets more and better brain nourishment from the food it has eaten and the brain is developed equally with the rest of the body. Nerve energy is stored up in the cells of the brain for future use to be drawn upon in after years when the brain is heavily taxed in school.

A child whose stomach is bloated from indigestion should not be allowed to enter the kindergarten or the public school, for educators know that such a child (unless cured) will eventually suffer physical collapse and be obliged to leave school. It would be better to ascertain the facts by a physical examination of the kindergarten applicant and keep all those out of the public schools who are not physically able to undertake school work. Malnutrition is easily cured at three or four

years of age by physical culture in the home, but if it is not cured in its incipency it will result in a retarded development, in which case it is much more difficult to effect a perfect cure.

In some of our large cities there are laboratories in connection with the public school system. These are under the direction of competent men, usually medical men. All school children are examined to discover physical and mental abnormalities, if they exist. The work is done in a very thorough manner and much useful information has been added to the world's knowledge of defective children.

If similar facilities could be secured where little children under the school age could be examined and where their parents could learn their true physical condition and also be instructed in proper methods of treatment, many of the minor defects and abnormalities could be corrected during the period of infancy and much of the suffering of pupils who now break down in school could be avoided.

The capitalist who would endow such an institution as this at the present time would be a greater benefactor of children than if he endowed a college.

THE MISSION OF THE KINDERGARTEN.

BY SARAH L. ARNOLD.

Supervisor of the Boston Public Schools.

The kindergarten is a happy place. The children love to be present. Whittier shows us the old school tradition when he describes

The feet that, creeping slow to school,
Went storming out to playing.

The kindergarten reveals nothing of that tendency. The feet of the children come hurrying to the kindergarten, and are slow to depart. Faces are animated and cheery, voices are gentle, and the room is filled with sunshine.

This counts for much. In such an atmosphere children can grow. They need the cheer, the sympathy, and the good

will in the schoolroom, just as a plant needs sunshine. Such an atmosphere is absolutely essential to the normal growth of child life.

Further, the kindergarten maintains, as a fundamental principle, that growth is the result of self-activity. It is easy for the adult, in dealing with children, in school or out, to assume that a child knows a thing because he is told. As a matter of fact he knows nothing which he has not learned to interpret through his own doing. A child left alone by himself makes mimic plays in which he shadows forth the life which he is striving to understand.

See, at his feet, some little plan or chart,
Some fragment from his dream of human
life,
Shaped by himself with newly-learned art;
A wedding or a festival,
A mourning or a funeral;
And this hath now his heart. . . .
As if his whole vocation
Were endless imitation.

The plays, the games, and the occupations of the kindergarten work in harmony with this tendency of normal child life, and through them the children learn the full meaning of the life about them. The kindergarten opens for the children the door into the larger life.

To the casual observer these plays and games stand for mere entertainment; those who are accustomed to study child nature realize that they have a deeper function. The child is, indeed, happily employed, but he is also profitably taught. He becomes familiar with the work of the blacksmith, the farmer, the carpenter, the miller; he recognizes the service of the father, the mother, the sister, the brother in the home; his little fingers learn to weave, to sew, to build, to model the gift which shall show to the home friends that he, too, wishes to contribute to their happiness. Every exercise with the gifts and occupations yields clearer vision and greater skill in the doing.

Again, the children in the kindergarten learn how to work together. Each one takes his part in the plays or games, making his own contribution to the general good. He rejoices in the victory

which another achieves. No kindergarten game is satisfactory unless every one takes part. In the outside life, in the street, in the home, and, sometimes, in grown-up society, we hear the expression, "Unless I can be head I shan't play." There is no trace of this spirit in the kindergarten. The children take hold of hands, help one another, and rejoice in the good fortune that falls to a comrade, or in the success which he achieves. An enterprise or institution which introduces this spirit into the public schools, and through them into society, should be unhesitatingly pronounced a success.

Nor should we think for a moment that this need is confined to the children of the poor. The only child in the home of luxury needs its ministration quite as certainly as the little one who is surrounded by brothers and sisters in the home where self-sacrifice and devotion are necessitated by the daily life. No one can cheerfully, bravely and wisely take his part in the world unless he knows something of the work and interests of others. In the republic each citizen must learn how to put himself in the place of his neighbor, that he may justly judge and wisely serve. In the little commonwealth of the kindergarten the children learn to measure themselves with their peers; to lend a hand to the playfellow who is weak, or ignorant, or hurt; and in this miniature republic they are receiving their first instruction in citizenship.
—*Lay Editorial in the Chicago Tribune.*

THE EVOLUTION OF "THE CHILDREN'S HOUSE," BOSTON.

By M. H. BURGESS.

About twenty-four years ago one of the teachers of the Dearborn School was much troubled over the enforced absence of some of her pupils, who were kept at home to care for younger brothers and sisters. She saw the need of a place where young children whose mothers were obliged to work for their living could be cared for through the day. Her desire was realized in the establishment by Mrs. Shaw, of the Albany Street, Boston, Day Nursery, which became not only a refuge for these "day-homeless" children, but a distinctly educational center. The aim, from the first, was to give the child not only the best physical care, but to consider his whole nature. To this end a kindergarten was established for all those of kindergarten age, while the younger children, under the care of a kindergartner, divided their time between elementary kindergarten, free play, and sleep.

A strenuous effort was made to educate the mothers toward constant improvement in their home-care of the children. Visiting in the homes, and giving counsel to the mothers as they came to the nursery for their children, have always been an important part of the matron's work.

The neighborhood and the need were such as to insure rapid growth in numbers, and very soon a nursery and kindergarten caring for over seventy children each day filled the large Davis house on Albany and Mall streets.

Soon after the nursery was started, sewing classes for the older girls were held on Saturdays. Occasional courses of lectures on practical subjects were given to the mothers by physicians and others. This was the nursery of twenty years ago, and it did an important work; but because the work was full of life its needs grew; and because where Mrs. Shaw gives she is satisfied with nothing

less than the best giving, the work was expanded to meet the needs and came to include such neighborhood agencies as manual training and singing classes, lectures, meetings for social enjoyment and training, etc.

One serious defect of the work was the short-lived influence over the children who, after brief connection with the nursery in time of need, were lost to it when that need ceased or when school age arrived. Many other children in the neighborhood, who never came in touch with the nursery at all, had meager home lives which appealed strongly for some enrichment.

The sewing classes were at first the only means employed to reach these children; but a sense of the value of a love of reading, and of the necessity of intelligent selection of books and direction in their use, soon caused the establishment of a juvenile reading room. This reading room is still continued, but greater effort is made now to get the books into the homes, where the families may become familiar with their contents. This we think better than to encourage the children to stay in the reading-room in their after-school hours, when they need outdoor air and exercise.

Observation of the spendthrift habits beginning in these young children led, here as elsewhere, to the establishment of a Stamp Savings station, which has been for years the regular bank for the youth of the community. Last year the aggregate number of depositors was 3,248. The total amount received was \$661.75; and the total amount paid out, \$643.15.

Neighborhood work is limitless in its opportunities. Out of these beginnings have grown clubs and classes bringing to the nursery—now the Children's House—about five hundred different children each week. In a work like this, comparisons are difficult; but it may be

safely said that the Day Nursery is still the most important part. This is the nucleus; from it we get our material, and while it continues the supply will never fail. By it, many families are kept together that otherwise would have been broken up and scattered. With the mother at work and no father—or a father disabled, physically or morally—the younger children find daily care in the nursery, while the older ones are profited and amused through their connection with the House. We do not wish to free the older children from responsibility, but that responsibility should be proportioned to their years. The little drudge of twelve, who was kept from school to care for younger children and had little outside of her task (made dreary by monotony and ignorance), now has her chance for both learning and fun.

One hundred and twenty girls between the ages of ten and twenty meet once a week in nine different clubs. Here some idea of organization and official duties and responsibilities is gained. In most of the clubs some handiwork is accomplished, but part of the evening is devoted to amusement, pure and simple. The amount of fun to be derived from frequent repetition of one favorite game is remarkable. Acting charades is one of the favorites, and is a good test of ability. From these charades the club leader learns to whom to assign parts when the preparations for the annual dramatic performance of the club begin.

The eight boys' clubs, with their hundred boys, are conducted like those of the girls, with a little more attention given to parliamentary rules and with more games of skill. Their working time is filled with basket weaving, sloyd, or gymnastics.

We find that sloyd is not only extremely advantageous for bright children, as a means of education and expression, but that it reveals and develops brain power where very little seemed to exist. We see in this last, hope of solving the problem of the stupid, naughty boy, who, deriving little good himself from the ordinary club, lowers its tone for all. Sloyd classes for girls and boys every afternoon and evening now form an important feature of our work. We are trying, too, on Saturday mornings, the experi-

ment (which promises success) of adapting the sloyd work to children from eight to ten years of age.

On Saturday, the name of our house is easily to be guessed. Anyone passing along the street and seeing the swarms of waiting children at nine o'clock, would exclaim at once: "This must be a Children's House!" Yes, it is; and more—it is a children's village; for the three houses of our settlement are filled by the one hundred and seventy children enrolled in the club of Happy Little Folks, and the Sunshine and Acorn clubs. The first is a kindergarten club, composed of children who have just exchanged "the paradise of childhood" for the primary school, with its mysteries of book-learning. They are very glad to return to the kindergarten occupations and games, on their school holiday. The little Sunshiners have advanced a step in age and are equal to an advance in work, reading, and play. The "Acorns," who expect to become great oaks in time, are furthering their growth, we hope, by this morning of music, reading, play, and work. They are at the fairy tale age and their appetite for reading is keen. The need of public play-grounds is demonstrated every week by the children's great enjoyment of outdoor play for forty-five minutes. Swings, hammocks, tops and marbles keep them occupied in warm weather; exercise with reins, sleds and snowballs gives them a warm glow on the coldest day.

Our object is to awaken and stimulate intelligence, to arouse and train the moral sense, and to give busy fingers occupation and skillful direction, and so to make of our little neighbors happier and more useful members of society. In no way can this be more effectually furthered than by showing these children how to enjoy their leisure hours in wholesome ways. In all social classes, the hours devoted to pleasure are likely to be the hours of greatest danger. Temptations to wrongdoing are then strongest, and resistance least easy. Three dancing classes and five gymnastic classes have proved a help in combining great fun and the strengthening of flabby muscles. Young lads and lasses, on the verge of manhood and womanhood, find their common meeting places, in our locality,

on street corners and in doorways. A dancing class for our club members, bringing together these older boys and girls, has met with gratifying success. The girls expect more mannerly treatment from the boys, when they see it demanded as their right by the teacher; and they in their turn give the boys more gentle and courteous response than is their wont in street corner conferences.

No description of our House would be complete without some mention of our menagerie. Betty, the dog, is a neighborhood feature. Wherever she goes some boy nudges his playmate and informs him: "That's the nursery dog!" and to show his own familiar footing in the Children's House, he calls out "Hallo, Betty!" He then goes on to fill the soul of his companion with envy by describing the last frolic of his club. Of course that other boy applies for membership and he, too, attains the high privilege of greeting the nursery dog.

Our cats serve often as object lessons; and as for the canaries, their rollicking enjoyment of a bath, in plain view of the admiring children, is an object lesson worth all the expense of the birds' keeping. Motherhood is illustrated every summer by a family of chickens cared for by the mother hen; while the father cock sometimes sets a good example also, by calling his family together and generously giving them the treasures he has found. Rabbits furnish endless employment for little hands that work laboriously to get them food from our scanty grass supply. Our aquarium, canaries and pet Angora rabbit are placed within easy sight of our nursery babies, and we have an embryo Band of Mercy and Animal Rescue League. Our pets help us in our constant endeavor to make the nursery less of an institution and more of a "home with a small h." The children of our Saturday clubs are devoted to animals. Neidlinger's animal songs

are always their first choice, and most of their pin money is used in acquiring new pets or in housing our flock.

A thoughtful observer watching our neighborhood sees many instances of parents following the lead of their children. One such instance we have seen in our woman's club. For several years we have had regular mothers' meetings with lectures and entertainments. Last spring a suggestion of organization met with ready response and the Woman's Neighborhood Club started on its career.

Occupation is absolutely necessary to keep such a club in harmony; so we began at once to prepare for a sale in June. We were incited to this by the example of the Denison House Woman's Club and the efforts of our club children. The women said: "We ought to show our children that we can do something." This sale gave us ninety-five dollars for our children's summer excursions, and gave the club members the comfortable feeling that the Woman's Neighborhood Club of Roxbury was a success. By another sale in December we contributed sixty dollars towards a new piano. It was very evident that the mothers' ideas of organization were copied from what they had heard of their children's clubs. The Woman's Neighborhood Club has a membership of fifty. Its constitution states that its object is the improvement of home and neighborhood conditions; so we hope for more co-operation from the parents in our efforts with the children.

Working with the other children and the parents shows us the results of the early training that we have given. This helps us to realize more clearly the kind of beginnings needed, and errors that we must avoid. With those engaged in work like this the desire ever grows so to incline the twig that the tree may be staunchly upright.—*Kindergarten Review*.

THE EVOLUTION OF A SCHOOL YARD.

BY SUSAN HUNTINGTON HOOKER.

The tradition of a school yard is that it is a playground, and the halo still hangs around the 7x9 yards possible in a crowded city. The real facts in the case are that the school law forbids children on the grounds except in school hours, and the intermissions, if there are any, are too short to utilize even this small space for real good play. Why then should our schools, where the children are entitled to æsthetic and moral, as well as intellectual development, be so barren and unattractive? Even our factories and railroad stations, which are supposed to exist purely for utilitarian purposes, have, many of them, demonstrated the possibility of beautiful surroundings. The children play on the grass at home and in the parks; why is it considered impossible in a school yard? Two years ago the Woman's Educational and Industrial Union of Rochester decided to make an effort to beautify the school grounds. They were promised the hearty co-operation of the park board and the superintendent offered to supervise and plan any improvement that they wished. There was no money to be had from the school board and it was decided to ask each principal to act on his own initiative in doing the work. Many schools raised large sums of money, and with the co-operation of the park superintendent some very beautiful school grounds were created. Some of the outlying schools had no money and worked out their own salvation. An illustration of one of these schools will serve as an object lesson worth copying:

Barren, baked yellow clay conglomerated with the debris from the city dump and a vast expanse of staring brick walls surrounded by high board fences was the problem that confronted one principal. The neighborhood being a poor one no money could be raised from that source. What could be done? Being a person of resources an original plan was soon devised.

Every boy in the upper grades was

promised a half holiday for work who would bring either some kind of a cart or a utensil for digging up the ground. After luncheon 250 reported for duty with the most marvelous collection of vehicles and tools. Everything from a grocery cart to a small wheelbarrow, seventy in all, and the utensils ranged from coal shovels to trowels and pokers—everything was pressed into service. One little fellow brought an iron tablespoon. The time was chosen just after a rain; the ground was hacked, picked, dug and disturbed over its entire surface. Some of the carts were used to load up the stones, old bones and mortar that revealed themselves; others to bring manure that had been solicited from the adjoining stables; others to bring the sods donated from two empty lots owned by a bank. Thus the work went merrily on from one o'clock until five, when the most marvelous transformation had taken place. This work was supplemented by several loads of street sweepings dumped there by the order of the city superintendent of public works and distributed by the children after school. Grass and flower seed were given by kind friends, and many flowering shrubs were brought by the children from their homes. The sods were laid on the outer edges and the grass seeds planted. Wide beds were made next to the building for the shrubs and flowers. On the north side a beautiful bed of ferns was brought by the children from the woods. A guard of chicken wire was placed around the seeded lawn for the season. The ugly brown fences were covered with morning glories and woodbine, with groups of sunflowers in the corners. All of this work was done at an expense of 70 cents. On Arbor day each grade planted two Boston ivy vines next the school building for the care of which they were responsible. Two months from the time the problem was proposed it was solved to the joy and pride of the entire community.—*The Kindergarten Magazine*.

DISCIPLINE.

By CLARENCE F. CARROLL,
Worcester, Mass.

Good discipline is the first condition of a good school. It should, however, be pointed out that our ideal of discipline has changed very much in recent years. Even a lay visitor may discover instinctively the spirit that pervades a schoolroom. At the present time we scarcely expect to find any schoolroom ruled by fear. No teacher would desire or dare to punish indiscriminately, as in the olden time. Teachers that are recognized both by parents and their associates as being among the best seldom—many never—strike a blow.

The rooms of such teachers are always in perfect order. There is freedom, but not license. Children are always attentive during recitation and hard at work during the study period. There is a spirit of co-operation and good will everywhere visible. The art of teaching is here at its best. The child progresses. He likes to work, he likes to attend school. The moral, intellectual and social conditions are of the best sort. While at school the child is still at home; he is in good society; he is stimulated to put forth his best effort; he is an observer, a reader, a thinker, a hard worker. This picture is not overdrawn. It can be verified a hundred times and more in our schools. Teachers of this type are increasing in number by the very force of public sentiment, and by the sentiment that exists in the profession itself.

As a rule, those who still believe in corporal punishment as a method of discipline are the unsympathetic, the ultra-conservative, and the weak teachers. It is not true that all of our older teachers are either severely conservative or old-fashioned. Many of them have kept up to date in discipline as in other things.

The sentiment regarding corporal punishment in a building depends very largely upon the head of the building. If the principal himself punishes frequently, the teachers are sure to follow his example.

The school board passed the following rule:

"Teachers shall maintain discipline by reasonable and proper means, resorting to corporal punishment only in extreme cases, and then only when approved by the principal or superintendent; corporal punishment shall not be inflicted in presence of a school. They shall make a record of all cases of corporal punishment, specifying the pupil's name and age, the date and nature of the offense made, and the severity of the punishment."

In spite of this, it is occasionally found that a teacher has invented some method of punishment peculiar to herself, that she has some ingenious method for inflicting bodily pain or exercising restraint which she conceives is not to be included under the limitation of the rules of the school committee. Occasionally a harsh teacher, or even a harsh principal, antagonizes a family or a community by lack of wisdom and the absence of proper sympathy. Sometimes, though very seldom, a mistake is made and the parent appeals for redress.

The rule regarding corporal punishment should be interpreted to mean that no teacher should lay hands upon any child in any act of restraint except in accordance with the rules of the school committee.

Both in the community, among teachers, and among members of the school committee, there is a wide variety of opinion in regard to the use of corporal punishment. I believe the time will come when the school committee will be ready to abolish corporal punishment as a means of discipline. If, however, it should be abolished suddenly at the present time, it would doubtless affect our present standard of discipline unfavorably. Some teachers would declare that they were unable to restrain bad boys, and principals would doubtless complain that some of their teachers were unable to main-

tain order. In my judgment, it is better for the present to place a premium on well-disciplined schools where corporal punishment has disappeared or is at a minimum.

Neither in the high schools nor in the evening schools is corporal punishment ever administered.

With the abolishment of corporal punishment there is always a tendency on the part of teachers to resort to sarcasm or in other ways to hurt the pride of children as a means of discipline. Doubtless, if corporal punishment were abolished, this method of inflicting pain would tend to increase. The teacher who wounds a child's feelings by the use of

venomous sarcasm is guilty of a worse offense than the teacher who inflicts corporal punishment in the regular way. If corporal punishment is inflicted wisely, the child quickly recovers from the evil effects; but the use of sarcasm has an entirely different result. Sarcasm is to be dreaded more than any other thing that a child can encounter. It is a cowardly resort of a teacher, and proves him to be utterly incapable of dealing successfully with a human being, especially one who is subject to his control. I can affirm that the principals in the high schools are on the alert to prevent and to restrain this mischievous method of discipline.—*Modern Methods*.

SCHOOL RIVALRY.

By J. B. MOWRY,

Chepachet, Rhode Island.

In the last century education changed its aim, its content, and its basis, and now the fulfillment of educational ideals depends chiefly upon the better training of the teaching force. Until recent years about the only requirement of a teacher was knowledge of the subjects to be taught—often a meagre knowledge of these. No special inquiry into the meaning and aim of education, no true insight into the nature of the child to be taught, was required. It is, however, encouraging to note that the people are coming to see as never before that the central defect in American education is the lack of trained teachers. Today the subject of child-study alone, which every teacher knows something about, requires volumes for its exposition, to say nothing of other branches of educational literature. It may be added that one of the most fortunate things that can happen to any teacher, however learned and experienced, is to come under competent supervision; and the highest interests of all are promoted by statute laws which tend to lessen the influence of nepotism and local politics in school affairs. At best, the children will be the

victims of enough educational malpractice.

Extended experience in the schoolroom leads the writer to conclude that school rivalry is one of the most prevalent evils in primary education. The term primary education as here used, includes all grades below the high school.

In the life of the child this feeling of rivalry develops early, having its roots in the instinct of combat shown in the play as well as in the more serious contests of children and young animals. Children are much under the sway of this feeling and school associations lead to the constant excitement of contest. The treatment of this feeling is a matter of peculiar difficulty to the teacher. It is a strong incentive to mental and physical exertion and within certain limits it is proper and even desirable that the teacher should appeal to it as a stimulus to study and conduct. As pointed out by Bain, its defects are: (1) It is an anti-social principle; (2) it is apt to be too energetic; (3) it makes a merit of superior natural gifts.

The anti-social tendency of the feeling is plainly seen in the triumph over com-

petitors which leads on the one hand to contemptuous "crowing," while on the other hand the sting of defeat often creates the germ of hatred. Sulley says that rivalry should be kept in the background; that children should be encouraged to excel rather for the sake of the attainment itself, than for that of taking down another. Says Miss Edgewood: "Superior knowledge is dearly acquired at the price of a malevolent disposition." Rousseau has pointed out that the teacher can further a worthy ambition by her mode of apportioning praise, basing her estimate on a comparison between what the pupil has been and what he is, and not on what he is and what somebody else is not. It is best to counteract malevolent sentiment in every form of competition between little children by developing the social feelings and sympathy with misfortune, thus tempering personal triumph with regret at the humiliation of another; in this way the spirit of rivalry passes into the more generous sentiment of emulation. Place-taking in class may be permissible, but even here it may be questioned whether the stimulus to ambition given to those near the head of the class is not offset by the apathy and discouragement produced in less gifted pupils, by standing at the foot of the

class. Bain says that pupils who possess unusual aptitude should be incited to modesty rather than to assumption; that distinguished merit should not always be attended with pæans; that small gifts by parents are useful incitements to lessons, while the prizes and distinctions of the school are attainable by only a very small number, and that in the early school life when the endeavor is to draw out the amicable sentiments, prizes, if used at all, require delicate manipulation. Objection is not made to emulation such as we have, for example, in class recitation when the teacher's question is passed on to other pupils after one has failed to answer; within limits it may be well to refer a pupil's question to other pupils for answers, but even along this line, to go further, and refer a pupil's questions or difficulties to another pupil of lower grade is not safe, as such procedure may sting to the quick a modest little scholar, while it may lead the informant into rivalry and a false estimate of himself.

Physicians note many cases of impaired health—even to the extent of serious brain and heart disorders, induced by the long continued excitement and tension of school rivalry—often intensified by ill-advised teachers and parents.—*Education*.

FREEDOM IN THE HIGH SCHOOL COURSE.

PROFESSOR EDWIN G. DEXTER,

The University of Illinois.

A glance over the history of educational development shows us two general classes of peoples; those two, to use a metaphor, have failed to see the trees because of the woods, and those who have failed to see the woods because of the trees. In other words, people whose intellectual near-sightedness has been of such a character that the individual failed to make any impression upon the mental retina because of the overwhelming impression of the class, and their opponents who were class blind and could only see

the individual. Peoples, past and present, might be classified in many other ways, but from the educational standpoint no other has a broader bearing than this.

The potency of the class is shown in the Chinese educational system by the engulfing power of the family. In India, by that of caste; in Egypt, by that of the religious sect; all bringing about stagnation and arrested development. The supremacy of the individual is first depicted in the philosophy of the soph-

ists and best of all by the educational doctrines of Rousseau with the climax of the French Revolution. With the clearer illumination which the intellectual light of today throws upon history and progress, we believe both of these tendencies, when carried to the extreme, are indications of defective vision. Centuries have proven that the total submergence of the individual means stagnation, of the class, anarchy; and it is for the present and succeeding generations to solve the problem of the intricate relation of the part to the whole. On no characteristic of progress has this controversy more forcibly impressed itself than on the educational. This it has fairly dominated and the measure of the educational system for a given time and place has been the prevailing attitude toward this problem.

What, in certain stages of the process in certain countries meant the merging of the individual into the whole, and in others, his absolute elimination from it, has taken on the idea of his relation to it. Education today recognizes the individual and his rights, but it just as firmly recognizes society in all its many interests.

In the question of the arrangement of the modern course of study it shows itself as plainly as ever. The studies which a given pupil pursues are determined by choice. Whose choice shall it be, his own or some one's else? Or, better still, his own or that of the educators as a class? If he is in school in which full elective freedom is allowed, his own will is supreme in the matter. If he is following prescribed courses, he is bound by the judgment of the whole, which whole, in this case, is made up very largely of men who have lived in times so different from our own as to make their influence of doubtful value. For certain portions of the pupil's school course this question has been answered to the satisfaction of most educators. The answer is that for the first eight years of the pupil's school life the choice shall not be his own. The question of electives has not been raised for this portion of his school career. And again the question has been practically settled for the years of college life. For this period he is given either a complete freedom of

choice of subjects, or one only slightly modified. The problem before us is that of the relative values of the pupil's choice or that of some one's else for the four intervening years. It is really an attempt to discover the place in the process of the individual's development at which his judgment in educational matters is valid.

We should all agree that individual freedom in the broadest sense is an aim in education; that the best development can only come through a realization of that aim; that entire freedom in the choice of school subjects should be allowed and must be allowed at the earliest moment at which it will be conducive to such a realization. On that point we shall all be of one mind, whether partisans of the most radical elective system or of a cast iron course of study for the secondary school. On the exact point in the student's career at which free choice means the fullest freedom we may differ widely. Freedom of choice must be considered not only in relation to the possibilities immediately involved, but those of a life time. If I should allow my three-year-old youngster at home full choice as to his play-ground, he would take the street and perhaps lose a leg under the electric car. By that single choice he would have sadly limited his freedom for after life. He could not then choose to be a soldier or a sailor, and in the ordinary competition of life he would fail in fully one-half the common avocations.

Let us then, for the purpose of this discussion, start out from three propositions upon which we shall all probably agree:

1. That individual freedom, in its broadest sense, is a thing to be attained at the earliest possible moment.

2. That in the matter of choice of school subjects entire freedom, or at least freedom to a considerable degree, be allowed the college student.

3. That for the first eight years of school life,—*i. e.*, the time before the high school,—such freedom of choice be denied upon the ground that the pupil is not yet old enough to know what knowledge is of most worth.

The two latter propositions are in a sense universal judgments, and are based

so largely upon a consensus of opinion that they need not be questioned here.

With them as a working hypothesis there are but three possibilities for the arrangement of the high school course of study.

1. A bringing forward of the freedom of the college method and making the high school course fully elective.

2. A continuation of fixed requirements for the lower grades, making the high school course one of cast-iron rigidity.

3. A gradual introduction of individual choice into the arrangement of courses.

On apriori psychological grounds there is an objection to the first two methods from the fact that each would introduce a sudden and dangerous increase in the freedom of choice at some definite point in the student's educational progress,—the first at the commencement of the high school course, the latter at its end. In nature, and consequently in the development of the child, no permanent progress is made through leaps and bounds. *Per saltum* is not nature's motto. Advance is made through gradual and often almost infinitesimal changes. The arbitrary divisions into primary, secondary and advanced school work are based upon the economy of the system. The student develops no more during the summer just preceding the high school or the college life than during any other similar season, and but little more should be expected of him, or allowed him in the way of privileges immediately after than before. From the standpoint of psychology there should be no sudden revolutions in method, and the educator who advocates fully prescribed work through eight grades and an entire freedom of choice beginning with the next, is on psychological grounds committing a fallacy. This would be just as true for as radical a change at the end of the high school, and in the matter of moral choice at least has proven its own weakness by the students in the German universities who have suddenly been relieved of the restraint of the gymnasium.

We would, then, on three grounds argue against either a complete freedom of choice, or an entire subordination of the individual for the high school course as a whole. There may, however, be

strong arguments in favor of such conditions. Let us see.

We have already expressed our belief that individual freedom of choice should be allowed just as soon as it is conducive to the best results. We do not like arbitrary rules ourselves, and it is probable that just as soon as the pupil in our schools has developed so far mentally as to reason upon the value of subjects in the school course, the question of choice may be considered. It certainly need not be before, for as the poet has said:

"Some pupils, like good natured cows,
Keep browsing and forever browse;
If a fair flower come in their way
They take it, too, nor ask, 'What, pray?'
Like other fodder it is food,
And for the stomach quite as good."

Although the question of the advisability of free choice on the part of the pupil may be raised when he arrives at the stage at which the value of studies is considered by him, I would nevertheless urge that it be not peremptorily settled by giving him full freedom of choice until he has had that experience with social conditions and what they mean as would make it probable that his choice should coincide, at least in the essentials, with the choice of those who have had the widest experience. In other words, until he knows what is best for himself. That is a conservative statement, and may be questioned by some, but after all no one can deny that three thousand years of conscious educational endeavor have shown progress and that existing conditions are the result.

But some will ask, who knows what is best for another? Will not what is best be interpreted in terms of what has been? Have not the Medieval schools of Germany such a grip upon our school system as to formulate the answer in terms of the middle ages? In answer I would say that our whole problem is one which has to do with a determination of the place in our school system at which these judgments of one person for another should cease. They do, and always must form an important part in the management of children. We try to make the little child see that a given course of action is the best one, and to choose it. If he does not, we make him follow it anyhow until either he or we change

the mind. I would not deny that it is sometimes we who are forced to change the mind, and this, in its relation to the school systems and methods shows perhaps in part, the increment of advance; but I would insist that in the long run the judgment of the adult with his experience is more valid than that of the child. The ideal thing would be for the child, from its earliest infancy, to choose the right thing every time, for the bearing of the problem of interest upon our question is undeniably important. It is a fact that the results of work done under compulsion are less valuable than of that done under the full dictation of choice. In the former case interest may be lacking; in the latter, never. There is a strong argument in favor of an early granting of freedom of choice and is made good use of by those who urge a free elective system for the high school.

But there is another question. Are the benefits derived by the student as great from a *poor* choice as from a *good* compulsion? From a desultory and not well integrated course voluntarily chosen, as from a proper series of progressive subjects related to one another and possible work to follow as to make it seem most probable that there would be the fullest academic freedom in after life, the latter being under direction and, if necessary, compulsion. In my own opinion it would not be, for a vast majority of the high school pupils of our land.

This is due, first, to the fact that there is a sequence to be observed in the choice of subjects which is absolutely determined by the subjects themselves and by the laws of mental development; and second, to the fact that even though the choice be governed by some future aim, the exact method to be followed in reaching the goal is not understood by pupils of high school age, and useless and even disastrous means will be employed. As an illustration of the first danger:

The student with full freedom of choice elects to omit algebra from his course. As is the case with so many, he sees no need for it. This omission bears no relation to his work in English or the modern or ancient languages, but when he wishes to take geometry or physics he is in trouble. These subjects he cannot do justice to without some knowledge

of algebraic processes, and even before he has finished the high school course his freedom has come back upon him like a boomerang, and pitifully limited his possibilities. He has by that one unwise choice deprived himself of the possibility of being an electrician or a surveyor; a scientist in the highest sense of the term, or a teacher in any school above the primary.

As an illustration of my statement that the average pupil with an ideal in life does not know the best method of realizing it, I want to tell a story. I cannot vouch for its truth in the concrete, for I made it up for the occasion, but after all, the stories with the most truth in them have been made up by some one, and this will convey my meaning.

There was once a boy who was suffering from the malady of pugilistic aspirations. In other words, we wanted to be a prize fighter. Most boys are temporarily so afflicted, and after all I am inclined to think that the permanent good effects from it are greater than the bad ones. Our boy was big of frame, though not big of brain, and he sat down to plan a most effectual course of training. He reasoned thus: Prize fighters must be big and strong; food makes one big and strong; therefore, I must eat heartily. So far so good. His conclusions were correct and his development was not disappointing. But thinking he might improve upon his diet he philosophized again. Prize fighters must have big muscles; muscles are meat. I need only muscles, so I will eat only meat, and he discharged the grocer. But he reasoned again: Prize fighters must have not only muscles, but *strong* muscles. Muscles are meat, but strong muscles are tough meat, so he changed his order at the butcher's and furnished for that functionary a clearing-house for everything otherwise unsalable. But even now our philosophical friend was unsatisfied, so he put on his thinking cap once more and this was the process of his reasoning: Prize fighters must have strong muscles, but these strong muscles need not be in his legs. Development there is immaterial. They must be in his arm and shoulder. I will see my butcher. He did so, and this was his order: Send me meat, send me tough meat, but it must

be from the fore-quarter. He got it. He ate it and nothing else, and never won a battle.

To me the sad fate of our ambitious young prize fighter illustrates the fallacy of too free an elective system in the secondary schools. Many a pupil with an ambition more worthy and more lofty than his, looks upon certain subjects, which have an important place in a solid, all around mental development, as did our hypothetical prize fighter upon potatoes and corn meal mush. He wanted to clap a beefsteak upon his biceps without understanding the intermediate process, and the average pupil is just as apt to wish to see the direct application of each subject that he takes, to some already well-defined future condition.

I am aware that arguments have been made in proof of the fact that the student is not so perverse. That he does choose what is best for him. Perhaps figures will be used to show that his is true for a very large percentage in certain schools.

If this could be shown for all the high school pupils everywhere, no one would be a more ardent advocate of the free elective system than I, for a right choice is better than a right compulsion; but if this cannot be shown, I would still argue that a right compulsion for all is better than a right choice by 95 per cent, with the other 5 per cent choosing wrongly. Even if we are impressed with the fact that so many of the pupils take algebra and geometry of their own accord, so much the better for them, but how about the rest? That school system is not to be admired, which simply does the right thing by the right pupil, but that one which does the right thing with the pupil who is wrong.

Under certain conditions a free elective course in the high school might work to perfection. Such conditions would be those in which the influence of the superintendent or of the principal was so great as to induce the pupils to elect the right courses almost without an exception. In schools as in society generally, custom counts for a great deal. A school is certainly not inconceivable, and perhaps actually exists, in which an elective system is in full force, but in which the general attitude toward the work is such that to fail to choose certain subjects would

mean a loss of scholastic caste on the part of the pupil. Custom, reaching back to the time when the course was not so elastic, may have decreed that certain subjects must be taken in order to preserve one's school dignity, and data coming from such a school would be misleading and would not be valid when applied to others.

In every school we must believe that the vast majority of the pupils, even though a freedom of choice were allowed, would be so influenced by some outside force as to determine the choice in the right direction. That would be true, first, for those students who were preparing for entrance to some higher institution of learning. For them the general choice for the future must determine, within certain limits, the immediate choice of subjects. In the case of your own State University this limitation would be less restrictive than in that of most higher institutions of the east. For it the elasticity of entrance requirements is so great as to have been recently commented upon by Commissioner Harris in the following language: "The University of Illinois has made a new and noteworthy departure in introducing an elective system of entrance conditions, carefully worked out in all its details. This university has practically said, 'Send us capable pupils, well trained, with minds well stored with something, and we will not inquire too closely what that something is.'" Although this is true, the conditions are such as to limit to an extent the freedom of electives.

Second, this would be true for those pupils who were influenced in the right direction at home; and third, for those who would not persist in a wrong course of electives contrary to the judgment of the teacher. But outside of these classes there are a considerable number to be accounted for, and they are the ones to whom a full freedom would be disastrous. Pupils without proper home influence and not amenable to mild treatment on the part of the principal; brilliant, perhaps, but erratic. The very kind which is often capable of the fullest development. These are the ones whom it is our business as educators to look out for and the very ones whom a full freedom of choice would leave to their own

devices. We would argue then, that under some peculiar conditions a free elective system might work well, but that those conditions are so rare as to make it unwise to introduce it as a system, broadcast.

The second possibility stated earlier in this paper is that of fully prescribed courses. This, however, we need not discuss. There is no necessity for setting up a straw man for the sole purpose of knocking him down, and the degree of specialization demanded in all lines of work today is such that a differentiation of work must be begun early, and that most of us would decide against such a system where the economic conditions allowed any other. In fully one-half of the three hundred high schools of our state the question of electives has never arisen because of the fact that the teaching force is not sufficient to offer more than one curriculum. This, however, is only a question of present necessity and one which time and growth in numbers will alter.

The third alternative alone remains,—that of a limited elective. This would be to suppose that the period of secondary school life was the one in which to introduce the individual responsibility of choice. The years covered by it are ones of rapid development. The pupil has

passed through the epoch of the “What ;” and the “How” and the “Why” have taken full possession. This world is enlarging very rapidly for him and he is perhaps discerning his special niche in it. But he has not yet reached it; he has not looked very far nor very deeply into life’s mysteries and might very easily get on the wrong track. Some powers must still be kept up, though many may be leveled. It is, I believe, our business to maintain them.

They need be but few at most, and gradually decreasing throughout the course with the last year practically one of full elective choice. To define the necessary safeguards more fully I should say that English must be insisted upon for the full four-year course; that mathematics should be required for at least three, and that in addition a certain amount of history and science be demanded, and that with these the requirements cease. That the remainder of the student’s time, and it would be about one-half, be devoted to the subjects of his own choosing. With this well applied, there would be but little danger of his going widely astray, and whether he go to the university, or into the wider fields of active life, the probability that he would find himself a misfit would be small.—*Journal of Pedagogy.*

THE DES MOINES GEOGRAPHIC EXPOSITION.

Perhaps nothing more stimulating to the teaching of scientific geography has occurred in the west than the exhibition, which was held concurrently with the meeting of the Iowa State Teachers’ Association, December 27-30, 1901, under the auspices of the science teachers of the State, and under the management of Professor W. H. Norton, of Cornell College, and Mr. A. W. Brett, of the West Des Moines High School.

At a meeting of the science teachers the subject of physiography was given special prominence. Dr. Samuel Calvin delivered a lecture on the Ice Age in

Iowa, illustrated with 100 views of typical Iowa land forms; and Professor Norton discussed the topic of Helps in Physical Geography, with direct reference to the exhibits.

The exhibits included the Harvard geographical models, the Harvard geological set, with its series of accompanying photographs and descriptive texts. Howell, of Washington, exhibited the new set of large models of the continents, two of the United States and one of the Chattanooga district. The large Jones relief globe and the new Klemm relief maps were shown. No exhibit in this

section attracted more attention than that of students' work from the laboratory of Cornell College showing methods of building models in different materials. For example, a relief model of Crater lake, Oregon, built of cardboards on which contour maps had been pasted. Another represented a drumlin area in Wisconsin executed in putty, the vertical control being obtained by steel pegs driven to give heights along contour lines of base map. One of the Harrisburg sheets showed Appalachian structure. There was one of Great Britain, and one an exercise model, in solution of a given problem, showing river piracy with concomitant capture of obsequents. As an example of a preliminary sketch used in making such a model, there was shown a clever contour map of an ideal glaciated

valley, showing cirques, lateral hanging valleys, broken bed, over-steepened sides, all in strong contrast with the lower unglaciated reach of the valley.

The map section was well filled, various firms and departments of the government being represented.

The section devoted to instruction by pictures was perhaps the largest exhibit of the kind ever shown in this country. About a thousand lantern slides were shown. Lanterns were furnished by Thompson, of Boston, and the McIntosh Co., of Chicago.

A very complete display of recent textbooks and of periodicals useful in geography teaching formed a pleasant feature of the exhibit.—*The Journal of Geography*.

Educational Statistics of States and Leading Cities — 1900-1901

States and Cities	Superintendents of Schools	Population Census 1900	Population Census 1890	School Enrollment	No. of Teachers	School Expenditures
ALABAMA	John W. Abercrombie	1,828,697	1,513,401	533,388	6,235	\$1,583,290
Mobile	S. S. Murphy	38,469	31,076	4,000	83	45,000
Birmingham	J. H. Phillips	38,415	26,178	6,000	110	50,717
Montgomery	Charles L. Floyd	30,346	21,883	8,500	70	35,506
ARIZONA	R. L. Long	129,931	88,243	17,817	431	\$37,253
Tucson	Francis M. Walker	7,531	5,150	1,300	24	16,463
Phoenix	W. B. Creager	5,544	3,152	1,700	31	30,000
ARKANSAS	J. J. Doyne	1,311,564	1,128,211	323,859	7,472	\$1,396,594
Little Rock	J. R. Rightsell	38,307	25,874	5,600	91	75,413
Fort Smith	J. L. Holloway	11,587	11,311	2,600	56	36,000
Pine Bluff	John H. Hinemon	11,496	9,952	2,565	45	27,543
Hot Springs	Geo. B. Cook	9,973	8,686	2,500	37	25,000
CALIFORNIA	Thomas J. Kirk	1,485,053	1,213,398	257,557	7,605	\$6,401,439
San Francisco	R. H. Webster	342,782	208,997	48,517	1,017	1,152,631
Los Angeles	James A. Foshay	102,470	50,305	21,500	530	549,015
Oakland	J. W. McClymonds	66,960	48,682	10,875	255	314,552
Sacramento	O. W. Erlwine	29,282	26,386	4,291	133	147,245
San Jose	Frank P. Russell	21,500	18,600	3,469	119	118,125
San Diego	Frank P. Davidson	17,700	16,159	3,300	84	79,170
Stockton	Jas. A. Barr	17,506	14,424	2,450	70	86,314
COLORADO	Mrs. H. L. Grenfell	539,700	413,249	117,555	1,699	\$2,894,333
Denver	(1)	133,859	106,713	27,181	530	750,180
Pueblo	(2)	28,157	24,558	5,400	158	176,031
Colorado Springs	John Dietrich	21,085	11,140	5,700	120	145,000
Leadville	Edward C. Elliott	12,455	10,384	2,119	47	48,247
CONNECTICUT	C. D. Hine (Sec.)	908,420	746,258	155,228	4,160	\$1,189,228
New Haven	F. H. Beede	108,027	81,298	10,000	456	377,950
Hartford	Thos. S. Weaver	79,850	53,230	15,133	115	400,465
Bridgeport	Chas. W. Deane	70,996	48,886	10,931	217	237,410
Waterbury	B. W. Tinker	45,859	28,646	7,687	186	190,422
New Britain	Giles A. Stuart	25,908	16,519	4,200	118	88,000
Meriden	A. B. Mather	24,296	21,652	6,000	109	78,000
DELAWARE	C. H. Layton (Sec.)	124,725	108,493	38,074	859	\$63,175
Wilmington	Geo. W. Twitmyer	76,508	61,431	11,143	276	380,049
Dover	Alex. Crawford	3,329	3,061	432	11	6,701
DIST. OF COLUMBIA	A. T. Stuart	278,718	230,392	46,519	1,226	\$1,046,122
Washington .....	.....	218,196	188,032	40,069	1,043	.....
FLORIDA	Wm. N. Sheets	528,542	391,422	112,890	2,075	\$765,486
Jacksonville	George P. Glenn	28,429	17,201	5,207	110	71,795
Key West	J. V. Harris	17,114	18,080	2,000	25	10,995
Tampa	B. C. Graham	15,839	5,532	1,800	50	65,188
GEORGIA	Gustavus R. Glenn	2,216,331	1,837,353	484,365	9,692	\$1,928,414
Atlanta	W. F. Slaton	89,872	65,533	14,241	215	168,793
Savannah	Otis Ashmore	54,244	43,169	8,764	180	123,000
Augusta	Lawton B. Evans	39,441	35,300	6,290	105	90,000
Macon	J. M. Pound	23,272	22,746	5,800	154	86,309
Columbus	Carleton B. Gibson	17,614	17,373	3,000	70	37,710
IDAHO	Miss Pearl French	161,772	88,548	35,329	1,067	\$99,898
Boise	John W. Daniels	5,957	2,311	2,200	37	60,000
ILLINOIS	Alfred Bayliss	4,821,550	3,826,352	958,911	26,313	\$1,167,219
Chicago	Edwin G. Cooley	1,698,575	1,099,850	262,738	5,951	7,929,496
Peoria	N. C. Dougherty	56,100	41,024	8,500	245	262,485
Quincy	Frederick G. Ertel	36,252	31,494	5,300	114	100,000
Springfield	J. H. Collins	34,159	24,963	5,866	136	129,135
Rockford	P. R. Walker	31,051	23,584	6,011	144	143,330
East St. Louis	John Richeson	29,655	15,169	4,500	120	130,000
Joliet	John J. Allison	29,353	23,264	5,500	140	94,227
Bloomington	J. K. Stableton	23,286	20,484	4,500	100	72,106
Elgin	M. A. Whitney	22,433	17,823	3,878	112	92,211
Decatur	E. A. Gastman	20,752	16,841	3,800	91	69,927
INDIANA	Frank L. Jones	2,516,462	2,192,404	564,807	15,627	\$2,021,158
Indianapolis	Calvin N. Kendall	169,164	105,436	27,334	650	729,106
Evansville	W. A. Hester	59,007	50,756	8,074	239	195,525
Fort Wayne	Justin N. Study	45,115	35,393	5,498	160	125,206
Terre Haute	Wm. H. Wiley	36,673	30,217	6,890	186	150,002
South Bend	Calvin Moon	35,999	21,819	4,500	126	137,163

(1) Aaron Gove, L. C. Greenlee, Charles E. Chadsey. (2) John F. Keating, J. S. McClung.

Educational Statistics of States and Leading Cities -- 1900-1901
(CONTINUED)

States and Cities	Superintendents of Schools	Population Census 1900	Population Census 1890	School Enrollment	No. of Teachers	School Expenditures
INDIANA—Con'd:						
Muncie	Wm. R. Snyder	20,942	11,345	3,900	97	\$100,946
New Albany	C. A. Prosser	20,628	21,000	3,800	75	56,000
Anderson	J. W. Carr	20,178	10,741	3,526	88	92,338
Richmond	T. A. Mott	18,226	16,608	3,119	84	77,644
INDIAN TER.	John D. Benedict	392,060	180,182	23,658	725	450,000
IOWA	Richard C. Barrett	2,231,833	1,912,297	566,223	12,906	9,028,918
<i>Des Moines</i>	(1)	62,139	50,093	10,600	327	209,281
Dubuque	F. T. Oldt	36,297	30,311	4,980	138	116,953
Davenport	J. B. Young	35,254	36,872	6,419	165	125,000
Sioux City	H. E. Kratz	33,111	37,806	5,980	167	143,788
Council Bluffs	W. N. Clifford	25,802	21,474	6,210	134	178,000
Cedar Rapids	J. J. McConnell	25,656	18,010	4,500	145	187,561
Burlington	Francis M. Fultz	23,201	22,565	4,471	116	91,358
Clinton	O. P. Bostwick	22,698	13,619	3,100	92	72,103
KANSAS	Frank Nelson	1,470,492	1,428,108	389,522	11,513	4,622,363
Kansas City	L. E. Wolfe	51,418	38,316	7,808	188	165,927
<i>Topeka</i>	W. M. Davidson	33,608	31,007	7,140	153	178,000
Wichita	R. F. Knight	24,671	23,853	4,500	97	89,200
Leavenworth	Miss M. E. Dolphin	20,735	19,768	3,480	66	59,206
Atchison	Nathan T. Veatch	15,722	13,963	1,900	41	34,423
KENTUCKY	H. V. McChesney	2,127,174	1,858,635	550,024	12,788	1,931,960
Louisville	E. H. Mark	204,731	161,120	27,626	650	555,811
Covington	John Morris	42,938	37,371	5,100	122	110,000
Newport	John Burke	28,301	24,918	3,800	81	46,000
Lexington	Wm. Rogers Clay	26,360	21,567	3,628	88	70,787
<i>Frankfort</i>	S. L. Frogge	9,487	7,892	1,721	37	23,370
LOUISIANA	J. V. Calhoun	1,281,625	1,118,588	186,337	4,156	1,179,484
New Orleans	Warren Easton	287,104	242,039	31,547	722	455,073
Shreveport	C. E. Boyd	16,013	11,979	1,900	42	35,000
<i>Baton Rouge</i>	R. C. Gordon	11,269	10,478	550	12	3,100
MAINE	W. W. Statton	694,466	661,086	211,085	6,445	1,297,972
Portland	Orlando M. Lord	50,145	36,425	8,307	220	189,599
Lewiston	I. C. Phillips	23,761	21,701	3,000	75	51,135
Bangor	Chas. E. Tilton	21,850	19,103	3,355	112	63,383
Biddeford	Royal E. Gould	16,145	14,443	1,712	50	30,354
<i>Augusta</i>	M. P. Dutton	11,683	10,527	956	22	17,500
MARYLAND	M. Bates Stephens	1,188,044	1,042,390	217,000	4,910	2,797,172
Baltimore	Jas. H. Van Sickle	508,957	434,439	65,000	1,600	1,279,936
Cumberland	A. Taylor Smith	17,128	12,720	2,300	37	80,000
Hagerstown	John P. Fockler	13,591	10,118	2,100	52	-----
<i>Annapolis</i>	Chas. E. Dryden	8,402	7,604	840	20	-----
MASSACHUSETTS	Frank A. Hill (Sec.)	2,805,346	2,238,947	468,038	13,622	13,800,358
<i>Boston</i>	Edwin P. Seaver	560,892	448,477	91,706	2,018	3,664,208
Worcester	C. F. Carroll	118,421	84,655	10,600	574	580,937
Fall River	Wm. C. Bates	104,863	74,398	16,244	388	370,549
Lowell	Arthur K. Whitcomb	94,969	77,696	12,658	288	275,320
Cambridge	Francis Cogswell	91,886	70,028	16,203	409	417,554
Lynn	Frank J. Peaslee	68,513	55,727	10,200	266	248,903
Lawrence	J. E. Burke	62,559	44,654	8,785	227	171,253
New Bedford	Wm. E. Hatch	62,442	40,733	8,513	220	212,745
Springfield	Thomas M. Balliet	62,059	44,179	9,224	333	321,804
Somerville	G. A. Southworth	61,643	40,152	11,000	280	260,403
Holyoke	Louis P. Nash	45,712	35,637	6,125	192	171,355
Brockton	B. B. Russell	40,063	27,294	7,179	175	135,236
Haverhill	R. D. McKeen	37,175	27,412	4,727	190	130,327
Salem	John W. Perkins	35,956	30,801	4,800	130	130,960
Chelsea	Walter H. Small	34,072	27,909	5,810	144	119,219
Malden	George E. Gay	33,664	23,031	6,374	176	173,916
Newton	Albert B. Fifield	33,587	24,379	5,600	200	200,000
Fitchburg	Joseph G. Edgerly	31,531	22,037	4,500	125	111,150
Taunton	C. F. Boyden	31,036	25,448	4,660	140	164,017
Gloucester	Freeman Putney	26,121	24,651	5,000	125	91,319
MICHIGAN	Delos Fall	2,420,922	2,093,890	522,391	13,267	7,717,966
Detroit	W. C. Martindale	285,704	205,876	40,303	966	1,251,825
Grand Rapids	W. H. Elson	87,565	60,278	15,000	395	318,499

(1) Amos Hiatt, S. H. Sheakley.

Educational Statistics of States and Leading Cities -- 1900-1901 (CONTINUED)

States and Cities	Superintendents of Schools	Population Census 1900	Population Census 1890	School Enrollment	No. of Teachers	School Expenditures
MICHIGAN—Con'd						
Saginaw	(1)	42,345	46,328	8,198	821	\$150,749
Bay City	J. A. Stewart	27,628	27,839	4,800	122	87,920
Jackson	L. S. Norton	25,180	20,798	4,054	90	75,427
Kalamazoo	S. O. Hartwell	24,404	17,853	4,146	107	82,208
Muskegon	David McKenzie	20,818	22,702	4,000	118	148,043
Lansing	Clarence E. Holmes	16,485	13,108	3,100	88	57,193
MINNESOTA						
Minneapolis	J. W. Olsen	1,751,394	1,310,283	387,541	11,230	5,517,797
St. Paul	Chas. M. Jordan	202,718	164,738	38,591	892	841,000
Duluth	Irwen Leviston	163,065	133,156	26,000	610	672,350
Winona	R. E. Denfeld	52,969	33,115	10,589	274	356,000
	J. A. Tormey	19,714	18,208	3,500	100	80,000
MISSISSIPPI						
Vicksburg	E. L. Whitfield	1,551,270	1,289,600	374,684	7,960	1,658,375
Meridian	Chas. P. Kemple	14,834	19,289	1,793	49	25,000
Jackson	J. C. Fant	14,050	10,624	2,500	51	24,800
	Edward L. Bailey	7,816	5,980	1,800	45	22,500
MISSOURI						
St. Louis	W. T. Carrington	3,108,665	2,679,185	750,380	18,700	9,000,000
Kansas City	F. Louis Soldan	575,238	451,770	82,712	1,751	1,586,140
St. Joseph	J. M. Greenwood	163,752	132,716	28,280	700	584,065
Joplin	Edward B. Neely	108,979	52,384	20,646	280	387,981
Springfield	Joseph D. Ellis	86,023	9,943	4,866	106	66,982
Sedalia	J. Fairbanks	23,267	21,890	5,449	85	56,660
Jefferson City	G. V. Buchanan	15,231	14,068	3,800	74	93,568
	J. W. Richardson	9,664	6,742	1,844	85	—
MONTANA						
Butte	W. W. Welch	243,329	142,924	39,430	1,214	1,085,368
Great Falls	R. G. Young	30,470	10,723	6,300	175	325,000
Helena	S. D. Largent	14,930	3,979	1,985	52	58,700
	Sarah J. Rogers	10,770	13,934	1,759	48	55,347
NEBRASKA						
Omaha	Wm. K. Fowler	1,066,300	1,062,656	289,220	9,463	4,403,222
Lincoln	Carroll G. Pearse	102,555	140,452	19,384	420	564,058
South Omaha	C. H. Gordon	40,169	55,154	7,800	177	122,457
	J. Arnett McLean	26,001	8,068	4,473	104	112,000
NEVADA						
Reno	Orvis Ring	42,335	47,355	6,676	325	225,622
	John Edwards Bray	4,500	3,593	840	20	17,850
NEW HAMPSHIRE						
Manchester	Channing Folsom	411,588	376,530	65,688	2,970	1,022,202
Nashua	Chas. W. Bickford	56,987	44,126	5,750	132	123,187
Concord	Jas. H. Fassett	23,898	19,311	3,700	86	68,000
	L. J. Rundlett	19,632	17,004	2,768	61	54,925
NEW JERSEY						
Newark	Charles J. Baxter	1,883,669	1,444,933	322,575	7,012	7,094,149
Jersey City	A. B. Poland	246,070	181,830	41,870	851	1,213,660
Paterson	Henry Snyder	206,433	163,003	32,174	586	634,153
Camden	L. A. Goodenough	105,171	78,347	17,849	365	425,330
Trenton	Martin V. Bergen	75,935	58,313	13,000	326	200,000
Hoboken	Leslie C. Pierson	73,307	57,458	9,840	221	268,017
Elizabeth	A. J. Demarest	59,364	43,648	9,145	199	125,060
Bayonne	Wm. J. Shearer	52,130	37,764	7,000	160	140,000
Atlantic City	J. H. Christie	32,722	19,033	6,019	128	128,625
Passaic	W. M. Pollard	27,838	13,055	5,000	100	93,763
Orange	F. E. Spaulding	27,777	13,828	4,500	126	120,203
	W. M. Swingle	24,141	18,844	3,200	90	76,200
NEW MEXICO						
Santa Fe	J. Franco Chaves	125,310	160,222	49,700	1,000	563,129
	J. A. Wood	5,603	6,185	1,706	13	7,860
NEW YORK						
New York City	Charles R. Skinner	7,268,694	6,003,174	1,209,574	31,768	33,421,491
Manhattan and	Wm. H. Maxwell	3,437,202	2,492,591	559,218	12,212	21,040,810
Bronx	John Jasper	2,090,600	1,515,301	325,979	6,866	11,575,294
Brooklyn	John H. Walsh	1,166,582	828,547	188,467	4,066	7,774,233
Queens	Edward L. Stevens	152,999	87,030	32,346	803	1,310,221
Richmond	Hubbard R. Verman	67,021	51,622	12,426	277	619,133
Buffalo	Henry P. Emerson	352,287	255,624	56,000	1,300	2,402,000
Rochester	C. B. Gilbert	162,608	121,896	24,896	622	622,018
Syracuse	A. B. Blodgett	108,374	82,143	21,090	485	400,073
Albany	Chas. W. Cole	94,111	82,943	12,896	377	298,640
Troy	J. H. Willets	60,651	60,956	7,000	220	135,598
Utica	George Griffith	56,383	44,027	8,003	241	219,277
Yonkers	Charles E. Gorton	47,931	32,033	8,200	191	202,481

(1) E. C. Warriner, N. A. Richards.

Educational Statistics of States and Leading Cities -- 1900-1901
(CONTINUED)

States and Cities	Superintendents of Schools	Population Census 1900	Population Census 1890	School Enrollment	No. of Teachers	School Expenditures
NEW YORK--Con'd						
Binghamton.....	Darwin L. Bardwell	39,647	35,005	7,300	203	\$156,363
Elmira.....	C. F. Walker.....	35,672	30,893	4,748	147	116,224
Schenectady.....	S. B. Howe.....	31,682	19,908	4,200	90	83,000
Auburn.....	Clinton S. Marsh.....	30,345	25,858	3,300	130	134,438
Newburg.....	James M. Crane.....	24,943	23,087	4,050	93	94,446
Kingston.....	Chas. M. Ryon.....	24,535	21,621	4,295	91	107,734
Poughkeepsie.....	Edwin S. Harris.....	24,029	22,206	3,400	88	91,000
Cohoes.....	Edward Hayward.....	23,910	22,500	2,787	65	53,325
Jamestown.....	Rovillus R. Rogers.....	22,892	16,038	4,006	116	92,067
Oswego.....	George E. Bullis.....	22,199	21,996	3,700	89	54,000
Watertown.....	Frank S. Tisdale.....	21,696	14,725	3,400	109	75,300
Amsterdam.....	H. T. Morrow.....	20,929	17,336	2,800	71	56,338
Mt. Vernon.....	Chas. E. Nichols.....	20,346	10,830	3,705	103	104,510
Hornellsville.....	Elmer S. Redman.....	11,918	10,996	2,200	65	44,542
NO. CAROLINA	T. F. Toom.....	1,893,810	1,617,949	415,132	7,450	1,191,183
Wilmington.....	John J. Blair.....	20,976	20,056	3,000	70	28,000
Asheville.....	R. J. Tighe.....	14,694	10,235	2,300	40	2,607
Raleigh.....	Edward P. Moses.....	13,643	12,678	3,000	60	25,000
Greensboro.....	G. A. Grimsley.....	10,035	3,317	1,883	36	16,000
Winston.....	Chas. F. Tomlinson.....	10,008	8,018	2,000	36	18,000
NORTH DAKOTA	J. M. Devine.....	319,146	190,993	77,686	4,083	1,593,594
Grand Forks.....	J. Nelson Kelley.....	7,652	4,973	1,735	40	37,228
Bismarck.....	William Moore.....	3,319	2,166	600	12	14,000
OHIO	Lewis D. Bonebrake.....	4,157,545	3,672,399	899,160	26,017	14,266,973
Cleveland.....	L. H. Jones.....	381,768	261,353	59,635	1,303	1,933,905
Cincinnati.....	Richard G. Boone.....	325,902	206,908	44,265	993	1,064,047
Toledo.....	W. W. Chalmers.....	131,822	81,434	21,667	455	471,314
Columbus.....	J. A. Shawan.....	125,560	88,150	18,855	508	771,137
Dayton.....	W. N. Hallmann.....	85,333	61,220	13,000	415	434,631
Youngstown.....	F. Treudley.....	44,885	33,220	7,300	175	180,000
Akron.....	H. V. Hotchkiss.....	42,728	27,601	9,979	190	249,471
Springfield.....	John S. Weaver.....	38,253	31,895	6,700	168	189,517
Canton.....	John M. Sarver.....	30,667	26,189	6,000	190	118,833
Hamilton.....	S. L. Rose.....	23,914	17,565	3,400	99	86,900
Zanesville.....	W. D. Lash.....	23,538	21,300	3,700	95	60,000
Lima.....	Charles C. Miller.....	21,723	15,981	4,300	100	65,000
Sandusky.....	H. B. Williams.....	19,664	18,748	3,067	76	68,340
OKLAHOMA	L. W. Baxter.....	398,331	78,475	99,602	2,343	688,095
Oklahoma City.....	I. M. Holcomb.....	10,037	4,151	3,000	60	60,000
Guthrie.....	Jas. R. Campbell.....	10,006	5,333	2,265	42	24,300
OREGON	J. H. Ackerman.....	413,536	317,704	89,405	3,742	1,598,725
Portland.....	Frank Rigler.....	90,486	46,385	13,000	330	335,774
Salem.....	J. S. Johnson.....	4,258	5,721	1,549	35	-----
PENNSYLVANIA	Wathan C. Schaeffer.....	6,302,115	5,258,113	1,153,209	29,973	22,615,307
Philadelphia.....	Edward Brooks.....	1,293,697	1,046,064	151,455	3,591	4,677,860
Pittsburg.....	Samuel Andrews.....	321,616	238,617	50,000	1,000	1,757,381
Allegheny.....	John Morrow.....	129,896	105,287	20,104	377	835,634
Scranton.....	Geo. Howell.....	102,006	75,215	14,464	341	488,000
Reading.....	E. Mackey.....	78,061	58,661	13,230	328	273,179
Erie.....	H. C. Milsimer.....	54,733	40,634	8,000	210	197,066
Wilkesbarre.....	Jas. M. Coughlin.....	51,721	37,778	9,000	178	179,521
Harrisburg.....	Lemuel O. Foote.....	50,167	39,385	9,638	197	216,417
Lancaster.....	R. K. Buehrle.....	41,459	32,011	6,000	120	125,088
Altoona.....	D. S. Keith.....	38,973	30,337	6,431	162	122,804
Johnstown.....	J. M. Berkey.....	35,956	21,805	5,800	141	125,000
Allentown.....	Francis D. Raub.....	35,416	25,228	5,560	126	121,623
McKeesport.....	H. F. Brooks.....	34,227	20,741	5,775	141	124,708
Chester.....	A. D. Vocum.....	33,988	20,226	5,500	135	118,000
York.....	A. Wanner.....	33,708	20,793	5,200	133	122,447
Williamsport.....	Chas. Lose.....	28,757	27,122	5,400	113	120,659
Newcastle.....	J. W. Canon.....	28,339	11,600	4,701	125	146,677
Easton.....	Wm. W. Cottingham.....	25,238	14,481	4,500	203	108,766
Norristown.....	Jos. K. Gotwals.....	22,265	19,791	3,690	77	58,019
RHODE ISLAND	Thos. B. Stockwell.....	428,556	345,306	87,221	1,887	1,733,486
Providence.....	Horace S. Tarbell.....	175,597	132,146	23,485	682	688,000
Pawtucket.....	Henry D. Hervey.....	39,231	27,633	5,000	152	122,982
Woonsocket.....	F. E. McFee.....	28,204	20,830	4,000	110	70,505
Newport.....	Herbert W. Lull.....	22,034	19,457	3,200	88	95,996

Educational Statistics of States and Leading Cities -- 1900-1901
(CONTINUED)

States and Cities	Superintendents of Schools	Population Census 1900	Population Census 1890	School Enrollment	No. of Teachers	School Expenditures
SO. CAROLINA	John J. McMahon	1,340,316	1,151,149	281,891	5,564	\$896,841
Charleston.....	Henry P. Archer.....	55,807	54,955	8,319	103	77,442
Columbia.....	E. S. Dreher.....	21,108	15,353	2,300	39	17,275
SOUTH DAKOTA	E. E. Collins	401,570	348,600	98,483	4,815	1,732,160
Sioux Falls.....	Frank C. McClelland.....	10,266	10,177	2,227	55	54,536
Pierre.....	Wm. P. Dunlevy.....	2,306	3,235	400	13	10,000
TENNESSEE	M. C. Fitzpatrick	2,080,618	1,767,518	485,354	9,795	1,751,047
Memphis.....	Geo. W. Gordon.....	102,320	64,495	11,071	218	143,464
Nashville.....	Z. H. Brown.....	80,865	76,168	12,223	232	166,261
Knoxville.....	Albert Ruth.....	32,637	22,535	4,509	92	49,431
Chattanooga.....	A. T. Barrett.....	30,154	29,100	5,034	99	45,808
Jackson.....	S. A. Mynders.....	14,511	10,030	2,383	42	25,848
TEXAS	Arthur Letevre	3,048,710	2,235,927	629,598	15,019	4,469,014
San Antonio.....	Thos. M. Colston.....	53,321	37,073	8,000	135	98,900
Houston.....	W. W. Barnett.....	44,633	27,537	8,942	152	147,673
Dallas.....	J. L. Long.....	42,628	38,067	6,681	120	85,320
Galveston.....	John W. Hopkins.....	37,789	29,084	5,300	85	65,000
Fort Worth.....	M. G. Bates.....	26,688	23,076	4,622	86	50,891
Austin.....	T. G. Harris.....	22,258	14,575	3,649	76	49,917
Waco.....	J. C. Lattimore.....	20,686	14,445	3,073	69	49,207
UTAH	A. C. Nelson	276,749	220,779	86,353	1,466	1,203,898
Salt Lake City.....	D. H. Christensen.....	53,531	44,843	12,044	315	264,557
Ogden.....	Wm. Allison.....	16,313	14,889	4,139	100	80,000
VERMONT	Walter E. Ranger	343,641	332,422	65,964	2,948	1,074,221
Burlington.....	Henry O. Wheeler.....	18,640	14,590	2,846	75	170,195
Rutland.....	Willard A. Frazier.....	11,499	11,760	1,735	54	30,000
Barre.....	O. D. Mathewson.....	8,448	4,146	2,000	41	18,070
Montpelier.....	Ernest G. Ham.....	6,266	4,160	775	25	14,857
VIRGINIA	Jos. W. Southall	1,824,184	1,655,980	370,595	8,054	1,989,238
Richmond.....	Wm. F. Fox.....	85,050	81,388	12,169	264	166,795
Norfolk.....	Richard A. Doble.....	46,624	34,871	4,800	80	58,000
Petersburg.....	D. M. Brown.....	21,810	22,680	3,334	52	23,016
Roanoke.....	Bushrod Rust.....	21,495	16,159	4,000	60	32,727
Newport News.....	John Sheldon Jones.....	19,635	4,449	2,350	51	38,246
Lynchburg.....	E. C. Glass.....	18,891	19,700	3,300	70	41,000
WASHINGTON	R. B. Bryan	512,103	357,222	123,491	3,869	2,669,039
Seattle.....	Frank B. Cooper.....	80,671	42,837	12,000	222	421,636
Tacoma.....	R. S. Bingham.....	37,714	36,006	7,500	200	209,897
Spokane.....	J. F. Saylor.....	36,848	19,922	6,287	166	240,380
Olympia.....	C. W. Durette.....	4,082	4,698	950	25	15,129
WEST VIRGINIA	Thos. C. Miller	958,800	762,794	240,500	7,300	2,317,400
Wheeling.....	W. H. Anderson.....	38,878	34,522	5,500	145	104,569
Huntington.....	W. H. Cole.....	11,923	10,108	3,500	54	33,000
Parkersburg.....	U. S. Fleming.....	11,703	8,408	4,386	71	60,000
Charleston.....	Geo. S. Laidley.....	11,099	6,742	2,724	62	-----
WISCONSIN	L. D. Harvey	2,069,042	1,693,330	471,197	13,063	5,735,724
Milwaukee.....	H. O. R. Siefert.....	285,315	204,468	37,000	900	733,510
Superior.....	B. B. Jackson.....	31,091	11,983	6,300	166	160,466
Racine.....	Geo. F. Bell.....	29,102	21,014	5,048	130	81,877
La Crosse.....	John P. Bird.....	28,895	25,090	5,742	129	90,016
Oshkosh.....	H. A. Simonds.....	28,284	22,836	4,729	125	107,441
Sheboygan.....	H. F. Leverenz.....	22,962	16,359	4,500	116	95,968
Madison.....	R. B. Dudgeon.....	19,164	13,426	3,055	75	73,330
WYOMING	Thos. T. Tynan	92,531	62,555	14,512	570	272,052
Cheyenne.....	J. O. Churchill.....	14,087	11,690	1,400	32	28,930
ALASKA	Sheldon Jackson	63,592	32,052	1,681	24	30,000
HAWAII	A. T. Atkinson	154,001	89,990	11,901	352	317,895
PORTO RICO	M. G. Brumbaugh	953,243	-----	50,000	1,000	400,000
San Juan.....	Wm. H. Armstrong.....	32,048	-----	1,363	40	34,822
Ponce.....	Miss Jean L. Ankrom.....	27,952	-----	2,080	57	33,514
PHILIPPINE IS.	F. W. Atkinson	2,000,000	-----	177,113	1,914	494,731
Manila.....	David P. Barrows.....	350,000	-----	-----	-----	-----
UNITED STATES..	W. T. Harris	85,271,730	65,069,756	16,146,073	412,773	\$222,485,533
U. S. Com'r of Education						

THE CHILD—A STUDY IN THE EVOLUTION OF MAN.

Among those works which carry the roots of the tree of pedagogy far and deep into the past this, "The Child," is perhaps the most exhaustive yet produced. It is a compilation of contributions to evolution. Of course, selection of material is made with special reference to its bearing on the development of a human being. It would seem that everything is rejected that does not go to prove that the human child came up the same identical road traveled by the animal kingdom.

In this book, as in other writings on evolution, there is a vast deal of nonsense. In many ways "The Child" would make an excellent work for a teacher of logic to have from which to draw illustrations for the fallacy, *Post hoc, ergo propter hoc*. For example, because a man and an alligator both have a round ligament, therefore, * * * we will not quote the inference or conclusion evidently intended by bringing the two statements together. Man walks more nearly erect than woman, and the monkey less nearly erect than woman, therefore woman's place is between man and the monkey. *Post hoc, ergo propter hoc*.

But it must not be inferred that this is an argument against the book. If we are to have a compilation in historic order, of the different theories advanced from time to time, in explanation of the human being's conduct, we want the bad with the good, else we would get a very erroneous idea of the growth of the theory of evolution as applied to human development.

In "The Child" Professor Chamberlain has gathered from a wide field and from deep reading. The chapter on "The Helplessness of Infancy" is an especially helpful chapter. It is well for teachers to get hold of the idea that the more complex life an animal is to live, the longer must be the period of infancy. This is especially true of the human. Among some of the lower savages, children acquire maturity enough to marry and set up house-keeping at ten or fifteen. Among us the day laborer is prepared for his life's work at twenty, but the professional man must spend ten years more to acquire those complex reactions required for his success. A few weeks for a pumpkin, but a hundred years for an oak, is nature's inexorable law.

The writer has three children of his own, and consequently refrains from commenting on the chapter treating of the "Resemblances of the Young of the Human and Other Animals." It does seem as though the chapter may apply to our neighbor's children, but there is no resemblance between our children and anything else on earth.

The chapter on "The Periods of Childhood" is especially interesting as showing what views have been held regarding the stages through which the child and the race passes. Professor Chamberlain makes no claim that the scientists are at all agreed yet as to what stages either the race or the child passes through. This chapter should be read by those people who think that they have their school courses arranged so that the child studies the thoughts originated by the race when it was in the same stage as the child is in.

The chapters on "The Language of the Child" and "The Arts of the Child," we find exceedingly long and dull, but they contain a collection that makes the book valuable as a reference work, and that may be of much interest to those who have not read the theories in other books.

"The Child a Revealer of the Past" and "The Child and the Savage" are, to our mind, the most interesting chapters in the book. It will be a great day for pedagogy when teachers fully realize that what the child instinctively likes to do, he likes to do because, it either was a short time since, or is now very necessary for the perpetuity and advancement of the race. Education takes on a new and wider meaning when we realize the ease with which man drops back to that condition called atavistic—when he takes on organs or characteristics of animals or savages far below him; then we begin to realize somewhat how carefully we should guard natural and social selection, and how strenuously we should educate to bring as many as possible to that degree of self-control where they may turn an iron will to check their passions and instincts so necessary for savages, but so dangerous if let loose among us.

The chapter on "The Child and Woman" will be of interest to teachers since so many are women. If it be that woman is partially developed man, may that not make her the superior teacher by placing her near the child in thought, feeling and action? Whatever be the final solution of the problem, the matter is worth our careful study and the theories are worth our careful consideration.

Let us close with the closing paragraphs of the book:

"The child, in the helpless infancy of his first years, in his later activity of play, in his *naïvete* and genius, in his repetitions and recapitulations of the race's history, in his wonderful variety and manifoldness, in his atavisms and his prophecies, in his brutish and in his divine characteristics, is the evolutionary being of our species, he in whom the

useless past tends to be suppressed and the beneficial future to be foretold. In a sense, he is all.

"If the education of the centuries to come be cast in the spirit of wisdom, the child will not, as now, lose so much in becoming a man,

the man or woman lose so much through having been a child, but the childlike elements necessary to the race's full development will persist to the greater glory of the individual and the perfection of mankind." (\$1.50. Charles Scribner's Sons, New York.)

ARTHUR D. CROMWELL.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

A PRIMER OF WORK AND PLAY.

As the title suggests, the subject matter is based on those varied activities of home, school, and industrial life which appeal most strongly to the interest and imagination of young children, while the text of the lessons furnishes in itself a direct stimulus to many forms of related seat work and primary school recreations.

Within the limits of a carefully selected vocabulary, averaging less than three new words to a page, there are presented over one hundred extremely interesting and easy full-page reading lessons, covering a wide area of thought, expressed in a charmingly natural and simple style, and beautifully illustrated.

That the principles controlling the selection and arrangement of the text have been applied to the highly artistic illustrations is plainly evidenced by the strong, beautiful outline drawings and the effectively illuminated miniatures, which are so free from confusing details that the entertaining stories they tell can be easily interpreted by the youngest school children, to whom this book is, from every point of view, most admirably adapted. (30 cents. D. C. Heath & Co., Boston and Chicago.)

AN INTERMEDIATE ARITHMETIC.

The author, Ella M. Pierce, is the supervisor of primary grades in the public schools of Providence, R. I. The book is intended for the use of pupils of the fourth and fifth years of school. It presupposes the development and understanding of number facts and relations to one hundred, of the principles of addition and subtraction by endings, of some simple quantity relations, and of the correspondence between these quantity relations and the number facts and relations. It recognizes, however, the truth that, in addition

to development and understanding, much drill is necessary so to fix these facts that they shall readily serve their purpose as mathematical tools. The work in this book has been arranged with the purpose of providing such exercises as should secure to the pupils a knowledge of fundamental number facts and relations, a knowledge of fundamental arithmetical processes, the power to picture conditions and see quantity relations, and the understanding of the correspondence between quality relations and number relations both as to facts and processes. (50 cents. Silver, Burdett & Co., New York and Chicago.)

AUGSBURG'S DRAWING. BOOK I.

This is a text-book for teaching drawing and color in the first, second and third grades. It is a three-book system, designed to teach form and color in the public schools. The subjects are treated topically, and so arranged as to give the widest latitude and the greatest flexibility in teaching. (\$1. Educational Publishing Company, Boston, New York and Chicago.)

CHILD STORIES FROM THE MASTERS.

These stories form a few modest interpretations of some phases of the master works done in a child way, and are beautifully illustrated with a number of full-page pictures reproduced from master works of art. The author, Maud Menefee, tells us that "in writing these stories, no attempt has been made to follow the plot or problem of the poems, which in almost every case lie beyond

the child's reach. The simple purpose as found in the whole, or the suggestion of only a stanza or scene, has been used as opportunity for picturing and reflecting something of the poetry and intention of the originals." This little book should be found in the library of every home circle. (30 cents. Rand, McNally & Co., Chicago and New York.)

CLASSIC MYTHS.

Mary Catherine Judd prepared the first edition of this work as an aid in nature study. This thought has been retained in the present edition. By reading these myths the child will gain an interest and sympathy for the life of beast, of bird and of tree; it will learn to recognize those constellations which have been as friends to the wise men of many ages. Such an acquaintance will broaden the child's life and make it see more quickly the true, the good, and the beautiful in the world about it. (35 cents. Rand, McNally & Co., Chicago and New York.)

FOUR OLD GREEKS.

The four old Greeks of this work are Achilles, Herakles, Dionysos and Alkestis. These stories are written in a remarkably easy and readable style. They are intended to teach the children, who read them, the character of the people to whom the stories relate. The author, Jennie Hall, of the Chicago Normal School, aims to introduce the readers to the beauties of Greek art, that they may grow richer in the knowledge of peoples and of beautiful images. (35 cents. Rand, McNally & Co., Chicago and New York.)

GESCHICHTEN VON DEUTSCHEN STADTEN.

The stories in this volume in tone and contents describe faithfully the various cities of the German Empire, portraying their local color and giving their local traditions. Besides furnishing interesting and attractive reading matter, the book includes also valuable suggestive material for exercises in conversation and composition. It is well suited for intermediate and advanced grades, and is carefully edited, with complete vocabulary. It is supplied with maps showing the locations of the cities mentioned. The style used by the

author, Menco Stern, is clear, yet idiomatic, and the subject matter consists not merely of fiction, but furnishes also many facts of historical, geographical, and literary importance. (\$1.25. American Book Company, New York, Cincinnati and Chicago.)

MELLICK'S LATIN COMPOSITION.

This book, by Anna Cole Mellick, A. B., of the Brearly School, New York, is intended for students who are reading Cæsar and using a Latin grammar for the first time. It aims to fix in the mind some of the simpler constructions of nouns and verbs as found in the Commentaries, and consists of twenty-five lessons, each illustrating certain grammatical principles, these being systematically arranged and graded according to difficulty. Each lesson contains, besides reference to standard grammars, exercises for translating into Latin, some of these being intended for writing in class without the aid of the grammar. (40 cents. American Book Company, New York, Cincinnati and Chicago.)

PORTER AND CLARKE'S SHAKE- SPEARE STUDIES—MACBETH.

The editors of this work are Charlotte Porter and Helen A. Clarke, the well-known editors of several standard works. This book will lend fresh life and interest to the study of Macbeth as required by the leading colleges for entrance. Commencing with a close and even critical study of the text, it leads the student, by suggestive questions based upon the plot and the characters, to a full appreciation of these and of the manner in which Shakespeare has expressed the ideas embodied in the play. A thorough knowledge of it is imparted:—by synthetic study of the dramatic movement and artistic factors of the play itself; by focusing about the moot points of the play—in a way to stimulate thought and discussion—selected divergent opinions, ranging from Shakespeare's century to ours; and by throwing open Shakespeare's library—the rare and generally inaccessible books of Elizabeth's time—in such a way as to indicate traces of them here and there in the play, and to reveal the unique quality of Shakespeare's creativeness. (56 cents. American Book Company, New York, Cincinnati and Chicago.)

THE PSYCHOLOGY OF CHILDHOOD.

This volume is the twenty-second of Heath's Pedagogical Library. The author is Dr. Fred-

erick Tracy, lecturer in philosophy in the University of Toronto. His object in presenting the volume to the public was to discuss infant psychology. He discusses the nature of the process by which the automatic and mechanical pass over into the conscious and voluntary. The subjects are considered from the standpoint of actual child study. Since 1893 this work has passed through five editions, and its value is evidenced by the fact that it has been translated into the German, Russian, Hungarian and Japanese languages. Dr. G. Stanley Hall says of this work: "The author

has here undertaken to present as concisely, yet as completely, as possible, the results of the systematic study of children up to date, and has included everything of importance that could be found. This work was greatly needed, and has been done with a thoroughness which all interested in the subject will gratefully recognize. The questions here treated are fundamental for both psychology and pedagogy, for the more fundamental the traits, the earlier they unfold." (90 cents. D. C. Heath & Co., Boston.)

Educational Articles in the March Magazines.

- "The Philippines; The Educational Problem," Fred W. Atkinson.....*Atlantic Monthly*
 "The Philippines; The Economic Future," Charles A. Conant.....*Atlantic Monthly*
 "The Educational Value of Domestic Science," Prof. Katharine Coman..*Good Housekeeping*
 "The Seashore Laboratory," Henry F. Osborn, LL.D.....*Harper's Magazine*
 "Measurements of Science Beyond the Range of Our Senses," Carl Snyder.....*Harper's Magazine*
 "On the Education of a Child from Eleven to Eighteen—VI.," Edward Howard Griggs.....*Ladies' Home Journal*
 "Dr. Loeb's Researches and Discoveries.....*McClure's Magazine*
 "America's First Painters," Rufus Rockwell Wilson.....*New England Magazine*
 "The Quality of Emotion in Modern Art," Claude Phillips.....*North American Review*
 "Constitutional Powers of the Senate," W. H. Moody.....*North American Review*
 "Charles William Eliot, President of Harvard University," George Percy Morris...*Review of Reviews*
 "The Metaphysical Movement," Paul Tyner.....*Review of Reviews*
 "The Need of Scientific Agriculture in the South," George W. Carver...*Review of Reviews*
 "The Launching of a University," Daniel C. Gilman.....*Scribner's Magazine*
 "Cuba Against the United States—The Question of Reciprocity," F. B. Thurber.*The Arena*
 "Cuba Against the United States—A Plea for Justice," L. V. de Abad.....*The Arena*
 "A National Library for the United States," Herbert Putnam.....*The Bookman*
 "The Carnegie Institution," Daniel Coit Gilman.....*The Bookman*
 "Formative Incidents in American Diplomacy," Edwin Erle Sparks....*The Chautauquan*
 "Critical Studies in German Literature," Robert Waller Deering.....*The Chautauquan*
 "The Story of Theodore Roosevelt's Life," Julian Ralph.....*The Cosmopolitan*
 "A Night's Work of an Astronomer," Dr. T. J. J. See.....*The World's Work*

BIRDS

The first 18 numbers of "Birds and Nature" were devoted to birds and each of the first 12 contain 10 plates, the other 6 contain 8 each. Price of these is 15 cents each. We have reprinted 10 editions of 5000 each of some of these numbers. These early issues always justify themselves and we earnestly urge recent subscribers to order back numbers. See list of color plates on another page.

The 54 back numbers of BIRDS AND NATURE, \$7.50, sent for \$5.00, make it \$6.00 and we will send the magazine for 1902.

Does This Offer Take? Somewhat!

I enclose check for \$10.00, for which you will please send two sets of BIRDS AND NATURE, unbound, to my address.

Cleveland, O., Dec. 20, 1901.

J. H. LAMB.

I enclose P. O. Money Order, for which please send the 54 back numbers of BIRDS AND NATURE, and other goods for Christmas, as follows:

Jacksonville, Ill., Dec. 20, 1901.

STERLING SHAW.

Enclose \$5.00, for which please send the complete set of unbound magazines for five years.

P. BROBERG.

New London, Minn., Dec. 17, 1901.

I enclose draft for the following: Fifty-four back numbers of BIRDS AND NATURE and the magazine for 1902, also two copies Bird Calendar, \$——.

New York, Feb. 27, 1902.

R. H. LAWRENCE.

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago.

JEAN MITCHELL'S SCHOOL

BY ANGELINA WRAY

Supt. L. H. Jones, of the Cleveland, O., public schools, writes:

"I have read and re-read Jean Mitchell's School. The book is a worthy contribution to the school thought and practice of our time. It is concrete pedagogy with life in it. I wish all the teachers in the country, from the first primary grade to the presidents of the great universities, might read it and have its kindly, helpful spirit breathed into them.

JEAN MITCHELL'S SCHOOL is superior beyond all comparison as a story of the *School*. Miss Wray has given us in Jean Mitchell, the teacher pure and simple in the midst of her wonderful work. The drama here unfolded is that belonging to this fundamental institution—the school. The teacher is a real heroine, winning, one by one, the lawless and the churlish among her pupils to a spirit of loving obedience and mutual regard and good fellowship.

This volume of 244 pages shows the growth of the "Ideal School" from month to month throughout the year. It is beautifully illustrated with drawings from nature studies appropriate to each month of the school year, and with half-tone pictures of the dramatic scenes. Elegantly bound in cloth. Price, \$1.25 a year.

Ask for our catalogues of Books for Children for
Supplementary Reading and of Books for Teachers.

SCHOOL AND HOME EDUCATION, Geo. P. Brown, Editor, is the foremost journal of the country for the thinking teacher. \$1.25.

— ADDRESS —

The Public School Publishing Company

BLOOMINGTON, ILLINOIS

Just Published

STORIES OF BIRD LIFE

By T. Gilbert Pearson

ONE may go far and not find a more sympathetic observer of birds than Mr. Pearson. He knows birds as few men have known them, and he loves them with a love that warms every word that he writes about them. Moreover, he is a lover, not a maudlin sentimentalist. There is not a trace of mawkishness in any line that he has written. In his effort to translate the thoughts and feelings of birds, he has not given them the thoughts and feelings of people, but he has tried to get

down to the bird nature and to reveal what he really believes to be that nature. It is this, perhaps, which mainly distinguishes his book from so many studies of bird life. We have had enough of fables—of birds pictured as folks in feathers; what we want is the truth about the birds themselves; and whether Mr. Pearson has found this truth or not we cannot feel but as we read that he is an honest searcher after it, and we like him for his honest search.

12mo. Cloth. 236 Pages. Beautifully Illustrated. Price, 60 Cents. Postpaid.

B. F. JOHNSON PUBLISHING CO.

RICHMOND, VIRGINIA.

I have received the first (February) number of **BIRDS AND NATURE** of my subscription, also the 175 pictures, which I ordered. The pictures are certainly charming—some of them exquisite. I have already planned to have a number of the more beautiful ones framed, and think they possess artistic merit sufficient to adorn the walls of any home. **W. H. JACKSON,**

Feb. 11, 1902.

Delair, N. J.

Enclosed you will please find a check for \$12.10, for which will you please send set of five double volumes, half morocco, also all that is included in your combination offer for \$2.10, and **BIRDS AND NATURE** for the present year, ten back numbers of **BIRDS AND NATURE**, and 60 colored pictures to the following address.

JOSEPH DANNER TAYLOR,
Feb. 10, 1902. Cambridge, O.

Having had a large number of calls for

PORTTRAITS of AUTHORS

the publishers of this paper have caused to be made large half-tone pictures of

Whittier and Longfellow

engraved in a superior manner, and printed on heavy, selected paper. They are especially adapted for the schoolroom, the size being 19 inches by 14 inches.

We offer these to teachers at 20c each, securely packed in tubes and delivered to any address. Send all orders with remittances to

NEW ENGLAND PUBLISHING CO.

211-215 Pemberton Building

Pemberton Sq.

BOSTON, MASS.

A-B-C BOOK OF BIRDS

—BY—

MARY CATHERINE JUDD.

With Nonsense Rhymes for the Little Ones and Prosy Sense for Older Ones. \$1.

"Resplendent in bright red binding, and with two beautifully executed bird portraits in natural colors on the outside covers, this bird book is of exceptional attractiveness and worth. The pages measure almost eight by eleven inches. Twenty-six superbly printed color half-tones of bird life are accompanied each by two pages of reading matter—one a very clever jingle, the other a compact prose statement of interesting and instructive information about the bird, his habit, and his haunts. Mothers, teachers and young folks will all find choice material here."—*Sunday-School Times.*

A. W. MUMFORD, Publisher,
203 Michigan Avenue, CHICAGO.

Of BIRDS of SONG and STORY \$1.

Birds of Song and Story. By Elizabeth and Joseph Grinnell. The authors are well known lovers of birds and have written much of interest about bird life, giving their own observations. They have carefully studied the haunts of their feathered friends and are acquainted with the folklore and legends relating to birds. The birds who receive special attention in this book are the robin, mocking bird, cat bird, hermit thrush, grosbeak, oriole, canary, sparrow, yellow bird, bluebird, tanager, meadow-lark, skylark and bobolink. Besides interesting chapters on these birds, the authors describe the female birds at meeting time and relate some legends, one of them giving the origin of the birds. Teachers will find "Birds of Song and Story" a desirable book to read to their pupils. There is a great deal of information about the habits of birds contained in the volume.—*Utica Press.*

OF BIRDS AND NATURE BOOKS.

All these pictures are remarkably fine and accurate in color as well as in outline, not for a moment to be compared with the pictures often put into children's books for the sake of the color. **C. W. BARDEEN.**

The Song Budget Music Series.

\$1.50 PER DOZ., \$10 PER HUNDRED.

1. **The Song Budget.** Paper, small 4to, pp. 76, 15 cts. Leatherette, 25 cts.
2. **The Song Century.** Paper, small 4to, pp. 87, 15 cts. Leatherette, 25 cts.
3. **The Song Patriot.** Paper, small 4to, pp. 80, 15 cts. Leatherette, 25 cts.
4. **The Song Budget Music Series Combined,** containing all three of the above in one volume, with opening exercises for schools added. Cloth, small 4to, pp. 260. 50 cts.

The distinguishing features of the Song Budget Music Series, of which nearly half a million copies have been sold, are these:

- 1st. To give a good deal for the money.
- 2d. To give only the best music.
- 3d. To give music just as it was written.
- 4th. To give only songs that are strong.

The Sentence Method of Teaching Reading. By GEORGE L. FARNHAM. Cloth, 50 cts.

As the word method was a step above the alphabet method, so the sentence method is a step beyond the word method. "The unit of thought is the sentence," and if the child considers the words as units in learning to read, he must unlearn his habits of reading in order to read naturally. Mr. Farnham shows how much more easily children will learn to read, and how much better they will read, where this method is employed. The book is in general use all over the country; extensively used in Chicago the past year.

OLD STORIES RETOLD

With 59 Original Illustrations. By PAUL BINNER. Boards, 16mo, pp. 64. 25 cts.

It is no longer a question whether children shall read fairy tales. The Gradgrinds have been silenced, and it is admitted that something else besides "facts" shall enter into the education of children. So the question is now how these fairy tales may be most attractively presented to the child, and surely never before have they appeared in more enticing dress.

EDUCATIONAL GAMES

Historical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards, 2½x3½ inches. 50 cts.

The cards contain 500 questions and answers, and afford a most interesting as well as profitable game for home and school.

Geographical Game, "Our Country," by A. M. EDWARDS, for Home and School. 100 cards 2½x3½ inches, 50 cents. Similar to Historical Game.

THE GAME OF INDUSTRIES

Is an educational game consisting of 100 cards and 400 questions and answers on the great industries of our country. 2½x3 inches, 25 cts.

LITERATURE GAME

By A. W. MUMFORD. 500 questions and answers on English and American Literature. 100 cards, 2½x3 inches, 25 cts.

SPECIAL OFFER.

The Four Games to One Address Prepaid for \$1.

A. W. MUMFORD, Publisher,

203 Michigan Avenue,

Chicago.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price : Two cents each assorted as desired; the 504 for only \$5.04; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,.....

- | | | |
|----------------------------------|--------------------------------------|--------------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Tarstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parrakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowned Pigeon. |
| 21 Bluebird. | 72 Sora Rail. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbill. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Wood pecker. |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | 147 Bartramian Sandpiper. |
| 47 Indigo Bird. | 98 Snow Bunting. | 148 Nightingale. |
| 48 Night Hawk. | 99 Junco. | 149 Roseate Spoonbill. |
| 49 Wood Thrush. | 100 Kingbird. | 150 Dickcissel. |
| 50 Catbird. | 101 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairly-tailed Mole.
- 256 Ctenaria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rall.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany - (Cows).
- 343 Harvesting in the Great North-west.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 } New England Aster.
- 347 } Late Purple Aster.
- 348 Wild Yellow or Canadian Lily.
- 349 Vesper Sparrow.
- 350 Calico Bass.
- 351 Mountain Lake.
- 352 Fruit: Banana.
- 353 Oswego Tea or Bee Balm.
- 354 } Fringed Gentian.
- 354 } Closed or Blind Gentian.
- 355 } Tall or Giant Sunflower.
- 355 } Black-eyed Susan or Oxye Daisy.
- 356 Wild Columbine.
- 357 American Redstart.
- 358 Trout.
- 359 Ocean Waves.
- 360 Domestic Fowls.
- 361 Western Willet.
- 362 Buffle-Head.
- 363 American Eared Grebe.
- 364 Louisiana Tanager.
- 365 Luna and Polyphemus Moths.
- 366 Prong-horned Antelope.
- 367 Sensitive Plant.
- 368 Medicinal Plant: Almond.
- 369 Western Horned Owl.
- 370 Long-crested Jay.
- 371 Fulvous Tree-toad.
- 372 Red-breasted Sapsucker.
- 373 Promethean and Sceloprian Moths.
- 374 Irish Setter.
- 375 Pitcher Plant (Nepenthes).
- 376 Medicinal Plant: Mandrake.
- 377 Hawk Owl.
- 378 Knot or Robin Snipe.
- 379 White-winged Crossbill.
- 380 Townsend's Warbler.
- 381 Water Shells.
- 382 Collared Lizard.
- 383 Fruit: Apple.
- 384 Medicinal Plant: Vanilla.
- 385 American Rough-legged and Young Red-tailed Hawks.
- 386 Short-billed Dowitcher.
- 387 Great-tailed Grackle.
- 388 Hooded Warbler.
- 389 Land Shells.
- 390 Gila Monster.
- 391 Medicinal Plant: Cassia Cinamon.
- 392 Fruit: Pomegranate.
- 393 Owl Parrot.
- 394 Gray Parrot.
- 395 White Pelican.
- 396 Marbled Murrelet.
- 397 Black Bear.
- 398 Pond and River Shells.
- 399 Fruit: Orange.
- 400 Medicinal Plant: Pepper.
- 401 Crested Curassow.
- 402 Harlequin Duck.
- 403 Canada Grouse.
- 404 Dovekie.
- 405 Beaver.
- 406 Marine Shells.
- 407 Fruit: Lemon.
- 408 Medicinal Plant: Cubebs.
- 409 Audubon's Oriole.
- 410 Marbled Godwit.
- 411 Rusty Blackbird or Grackle.
- 412 Surf Scoter.
- 413 American Elk.
- 414 Nautilus Shells.
- 415 Flowers: Mountain Laurel.
- 415 } Trailing Arbutus.
- 416 Medicinal Plant: Hops.
- 417 Bullock's Oriole.
- 418 Sanderling.
- 419 Great Northern Shrike.
- 420 Brandt's Cormorant.
- 421 Buffalo.
- 422 Agates.
- 423 Flowers: Great Mullein.
- 423 } Moth Mullein.
- 424 Medicinal Plant: Cocoa Fruit.

425 Anna's Hummingbird
 426 Rufous Hummingbird
 427 White-throated Sparrow
 428 Parula Warbler
 429 Tourmaline
 430 Indian Elephant
 431 Walrus
 432 Bengal Tiger
 433 Yellow-bellied Flycatcher
 434 Olive-sided Flycatcher
 435 Tree Sparrow
 436 Black-throated Green Warbler
 437 Beryl
 438 African Lion
 439 Alaskan Moose
 440 Polar Bear
 441 Pine Grosbeak
 442 Field Sparrow
 443 Carolina Wren
 444 Black-poll Warbler
 445 Turquoise
 446 Striped Hyena

447 Giraffe
 448 Miriki Spider Monkey
 449 White-eyed Vireo
 450 Rivoli Hummingbird
 451 Worm-eating Warbler
 452 Chipping Sparrow
 453 Topaz
 454 Rhesus Monkey
 455 Asiatic or Bactrian Camel
 456 Zebra
 457 Golden-crowned Kinglet
 458 King Rail
 459 Brown-headed Nuthatch
 460 Sharp-shinned Hawk
 461 Quartz
 462 Greenland Whale
 463 Bur or Spear Thistle and Pasture or Fragrant Thistle
 464 Irish Moss
 465 Blue-headed Vireo
 466 California Thrasher
 467 Broad-tailed Hummingbird

468 Broad-winged Hawk
 469 Quartz
 470 Domestic Cat
 471 Soapwort or Bouncing Bet and Snake-head or Turtle-head
 472 Sugar Cane
 473 Winter Wren
 474 Leconte's Sparrow
 475 Northern Phalarope
 476 Hairy Woodpecker
 477 Opal
 478 Purple Violet and Hepatica
 479 Sheep
 480 English Walnut
 481 Black-chinned Hummingbird
 482 Burrowing Owl
 483 Audubon's Warbler
 484 Red-backed Sandpiper
 485 Garnet
 486 Black Cohosh and Arrow Head
 487 Cows
 488 Sweet Flag

489 Green Heron
 490 Varied Thrush
 491 Short-billed Marsh Wren
 492 Prairie Warbler
 493 Bird Stories
 494 Horse
 495 Robin's Plantain and Blue Vervain
 496 Medicinal Plant: Cotton

497 Swallow tailed Kite
 498 Alice's Thrush
 499 Carolina Chickadee
 500 Violet-green Swallow
 501 Starfish
 502 To be supplied
 503 Sea or Marsh Pink and Fireweed
 504 Medicinal Plant: Tobacco

A SET INCLUDING ONE OF EACH OF THE ABOVE

504 PICTURES FOR \$5.04.

Order some of these Pictures for Bird Day and Arbor Day.

A. W. MUMFORD, PUBLISHER,
203 Michigan Ave., Chicago.

Please send us your publication, **BIRDS AND NATURE** for the current year, including the back numbers, which you offer for six dollars (\$6.00) and charge the same to Bradley Institute.

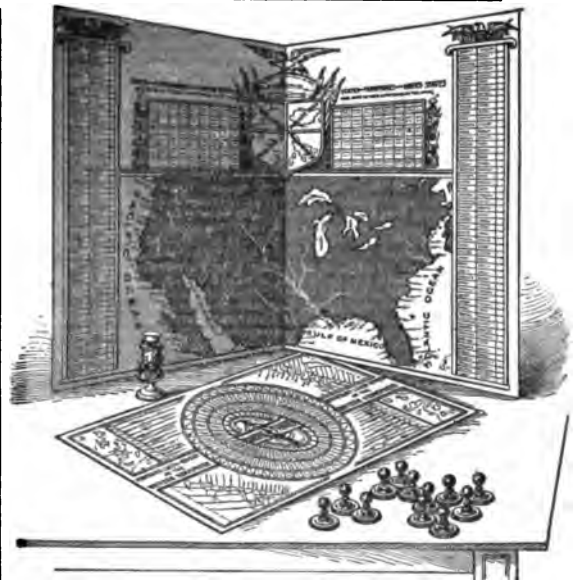
C. T. WYCKOFF.

Peoria, Ill., Feb. 11, 1902.

Enclosed please find money order for \$.....for which please send me the five double volumes **BIRDS AND NATURE**, half morocco.

LUMAN CARL.

Sharon, N. Y., Jan. 18, 1902.



THE GAME MEMOGRAPHY.

We are in receipt of an ingenious game which has all the excitement and fascination of the best parlor game and yet yields instruction as well as pleasure. It gives the player a large number of the most useful facts regarding the geography of our country, and is equally attractive to old and young.

For the child who has no taste for geography and who cannot remember what he reads, this game will prove a great blessing. It sells at \$1.50.

JOHN W. ILIFF & CO., 110 Wabash Av., Chicago

Quick Work at Long Distance.

University of Wyoming.—(*Special delivery letter.*)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? **Telegraph.**—To *Principal W. B. Carhart*, Coeymans, N. Y., March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart*, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To *President Smiley*, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley*, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To *Mr. Carhart*.

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart*, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To *Mr. Carhart*, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart*, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To *President Smiley*, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart*, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To *Mr. Carhart*, March 27.

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

BOUND VOLUMES OF “BIRDS AND NATURE”

Do you wish to know about the volumes of BIRDS
and NATURE? Read these words of praise:

Enclosed find money order for \$8, for which please send me four double volumes, one-half morocco, BIRDS AND NATURE. I shall want Vol. 9 and 10 when complete.
Clemson College, S. C., April 29, 1901.

P. H. ROLFS.

Books received, and I shall want Vol. 9 and 10, in half morocco as soon as they are out.
Salt Lake City, Utah, July 7, 1901.

F. A. TIMBY.

Put me on the list for bound volumes as fast as issued.
Leavenworth, Kans., May 6, 1901.

PAUL B. JOHNSON.

Hereafter please send me the bound volumes as soon as they come out.
Youngstown, Ohio, Nov. 22, 1901.

WM. W. ZIMMERMAN.

I have your letter of the 12th inst., enclosing your bill for \$11.50 for 10 volumes of BIRDS AND NATURE and subscriptions for 1902. I enclose my check covering the bill and beg to thank you for the interest you have taken in my behalf in securing this set of books.

DANIEL LAMMOT, JR.

Philadelphia, Dec. 14th, 1901.

Set of ten Volumes, cloth, - - - \$10.00

Set of five Double Volumes, half morocco, - 10.00

A. W. MUMFORD, Publisher
203 Michigan Avenue

CHICAGO

—PRAISE FOR— BIRDS AND NATURE

(\$1.50.)

BIRDS AND NATURE, published by A. W. Mumford, Chicago (\$1.50 per year), is a beautiful magazine devoted to nature study, with birds as the chief attraction. At least four bird-plates printed in natural colors appear in each issue. Birds' eggs, flowers, mammals, fish, insects, fruits, shells, minerals and gems all find a place on its pages. The reading matter is excellent. The magazine should have many readers among children and young people, as it cannot fail to exercise a fine educative influence.—*Epworth Herald*.

Enclosed please find \$3 for **BIRDS AND NATURE** for 1902 and 1903. I cannot get along without it—it is the best on the market. ALBERT A. BOTT.

Rochester, N. Y., Dec. 17, 1901.

I am exceedingly pleased with the publication—**BIRDS AND NATURE**—it is by far the best of the kind I have ever seen and affords a continual source of amusement and instruction to my family. The monthly numbers are eagerly watched for and mentally devoured.

Brussels, Ont., Dec. 5, 1901.

W. M. SINCLAIR.

The **BIRDS AND NATURE** magazine has recently reached the boy and it gives me pleasure to assure you of the delight he finds in the publication. HENRY L. TAYLOR.

University of the State of New York, Albany, N. Y., Nov. 27, 1901.

Every lover of Nature and Art must commend the beauty and value of **BIRDS AND NATURE**. We eagerly look forward to the arrival of each new copy. BENEDICTINE SISTERS.

School of St. Mary, Winona, Ill., Oct. 20, 1901.

I have been a subscriber to **BIRDS AND NATURE** since it was first issued and like it better than ever. ENGWARD JEPSEN.

Minneapolis, Minn., Oct. 29, 1901.

A. W. MUMFORD, Publisher,
203 Michigan Avenue, Chicago.

Of Birds and Nature, \$1.50.

A copy of your magazine for January, 1902, I found in our office and it seems to be just the magazine for which I have been looking for some time. You may begin the subscription with the January number if you please.—**WM. P. CORNELL**, Chicago, Ill., Jan. 17th, 1902.



**THE SMITH PREMIER
OCCUPIES AN
IMPERISHABLE POSITION
IN THE BUSINESS WORLD.**

Unquestioned superior merit annually adds thousands of names to the long list of Smith Premier users, representing every line of trade and every profession. It is held in lasting regard at home and abroad.

ILLUSTRATED CATALOGUE FREE.

The Smith Premier Typewriter Co.

118 Clark Street, Chicago, Ills.

A B C Book of Birds.

By MARY CATHERINE JUDD.

A Book for Children, both large and small, price \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

Mary Catherine Judd has written an A B C book of birds, which contains twenty-six as handsome colored plates of as strikingly plumaged birds as it is possible for the color photographic art to produce. The first illustration is that of a fine specimen of the great bald eagle backed by the American flag. To make the bird fit the first letter of the alphabet it is called, as rightly it should be, the American bald eagle. Among the other birds shown are the gorgeous flamingo, the resplendent cardinal, the ruby-throated hummer, the great diving loon, the familiar meadowlark, and the practically extinct wild pigeon. Miss Judd has given a catching little rhyme with each bird, as well as an accurate prose description of the bird and its habits. The color scheme of both covers is beautiful. The bluejay adorns the front of the book, while the cardinal, as natural as life, lends his beauty to the back. No better child's book can be found.—*Chicago Record-Herald*.

The "A B C Book of Birds" is designed for children, large or small, with nonsense rhymes for little ones and prosy sense for older ones. Every letter in the alphabet is represented by a bird, beginning with the American bald eagle and ending with the zoo-zoo, or mourning dove. There is a jingle for each bird and the author then tells in prose some interesting facts about the bird represented. The book is an instructive as well as pleasant one for children, who can learn therefrom many things about birds. The same publisher has issued a very attractive bird calendar for 1902, which sells for 50 cents.—*Utica Press, New York*.

Photographs of birds in natural attitudes and colored in exact imitation of the real colors of the feathers, and combinations of colors peculiar to our wild songsters, are the features which recommend the "A B C of Birds" to the little folks. It is hardly enough to say that the pictures reflect life, for they are so remarkably good. Mary Catherine Judd, the sponsor of the book, has written nonsense rhymes for the little ones and prosy sense for older ones. The paragraph intended for the grown-ups gives the Latin and common names of the bird, something about its habits and its home. The nonsense rhyme begins with the letter of the alphabet, and jingles the words together in a way which children love to hear.—*Chicago Evening Post*.

This "A B C Book of Birds," as its title indicates, is a volume treating of birds, and primarily intended for children. The order of the alphabet is followed in the selection of birds for description. Thus the letter A represents the American bald eagle, B the bluejay, C the cardinal grosbeak, and so on throughout the alphabet.

The descriptions are in rhymes of from one to five stanzas, easily comprehended and memorized by the child. Each of these descriptions also acquaints the child with some of the most prominent characteristics of the bird described. Moreover, each description is accompanied by a full page illustration of the bird described, the illustration faithfully reproducing the form, coloring, and, whenever possible, the size also of the bird.

For children this volume is not only exceedingly attractive but also instructive. At the same time that the alphabet is being learned the memory is being exercised as the rhymes by repetition are being committed, and the rhymes almost unconsciously familiarize the child with the principal characteristics of the birds described.

And the book is not without its adaptation to older people, for each illustration and child's rhyme is followed by a page paragraph giving a more technical description for maturer intellects.—*Denver Post*.

For the very little ones Miss Mary Catherine Judd has prepared, and A. W. Mumford of Chicago has published, "The A B C Book of Birds." The illustrations in color are marvels of the lithographer's art, presenting the various birds in all the brilliancy of their coloring, and in surroundings, as to color, true to life. Each illustration is accompanied by a few lines of verse for the child, while on the opposite page is a paragraph in prose giving the scientific name of the bird and a few lines of scientific information about them which will help the grown-ups to explain the pictures more intelligently to the little ones.—*Minneapolis Journal*.

A. W. MUMFORD, PUBLISHER,

203 MICHIGAN AVE., CHICAGO.

Of BIRDS AND NATURE, \$1.50.

I have taken your magazine, "Birds," from the first number, and think it is the finest thing of its kind published. The colored plates enable one to recognize the common birds, even when you have no technical knowledge. The children at school are delighted with the pictures, and become very much interested in birds and their habits, as well as familiar with the names.

OLLIE M. MOORE.

Danville, Ill., Jan. 21, 1902.

Enclosed will be found a money order for \$9.00, for which please send the following: "Birds and Nature," 54 back numbers, and the magazine for this year to ———. Also receipt the enclosed bill, giving me credit for 1903, and send me the set of Forest Tree Pictures in photogravure.

C. C. PLITT.

Baltimore, Md., Feb. 6, 1902.

Enclosed find \$....., for which please send me "Child-Study Monthly and Adolescence" and "Review of Education." I wish to see if they will be helpful in our school-work here.

WILFRID ROWNTREE.

Ramallah, Jerusalem, Palestine, Jan. 18, 1902.

I am pleased to say that it seems to me that the scope and excellence of your "Review of Education" are improved, and I hope the venture on your part may meet with the success it deserves.

E. W. GRIFFITH.

Glens Falls, N. Y., March, 3, 1902.

We have been highly pleased with "Birds and Nature."

JULIAN STENNENBERG.

Caldwell, Idaho, Jan. 13, 1902.

Have enjoyed the magazine very much; best one of the kind that I have ever taken.

LOU M. RICKEE.

Berwick, Me., Jan. 14, 1902.

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago.

When a Teacher Invests Her Hard-Earned Money

In an educational magazine she wishes to subscribe for the one that will inspire her, help her in every-day work and keep her abreast of the educational times.

American Education

Is just that kind of magazine. Before subscribing, however, she should send for a free sample copy and note for herself how excellent are its many special features.

NEW YORK EDUCATION COMPANY

81 Chapel Street ALBANY, N. Y.

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

43-45 E. 19th Street, New York City.

116-120 Summer Street, Boston, Mass.

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of these Forest Trees.

SPECIAL OFFER—BIRDS AND NATURE one year and a complete set of these Trees for only \$2.00.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

Does This Offer Take? Somewhat!

Your offer came to me some time ago, but I was unable to avail myself of it until now. However, I wish my subscription to begin with the October number and I think that it will amount to the same thing. I also wish the three sets of typical Forest Trees in photogravure. I enclose the \$2 for the magazine and the pictures.

MABEL REED BENWAY.

N. Towanda, N. Y., Dec. 17, 1901.

Enclosed please find \$2 for BIRDS AND NATURE and a complete set of Forest Trees.

OLIVER H. HAM.

Portsmouth, N. H., Dec. 20, 1901.

Enclosed please find check for BIRDS AND NATURE one year and a complete set of Trees for the Staples Schools.

H. L. WALDRON.

Staples, Minn., Dec. 11, 1901.

A. W. MUMFORD, Publisher.



THE ALTON'S ENGINEER.
IF YOU WILL SEND THE ADDRESS
OF A PERSON WHO, WITHIN A YEAR,
WILL HAVE USE FOR THE CHICAGO
& ALTON RAILWAY



(TERRITORY COVERED OUTLINED IN
ABOVE MAP), WE WILL MAIL TO YOU
A PICTURE, 4 1/4 X 8 INCHES, OF THE
ALTON'S ENGINEER. IF, IN ADDI-
TION, YOU WILL TELL US IN WHAT
PUBLICATION YOU READ THIS AD-
VERTISEMENT, WE WILL SEND TO
YOU A PAMPHLET ABOUT THE BIG-
GEST CAMERA IN THE WORLD.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT, CHICAGO &
ALTON RAILWAY,
CHICAGO, ILLINOIS.

Attention!

Teachers!

THAT BAD BOY AND OTHER STORIES,

By a retired teacher who taught from the district
school to the university, tells all about how to man-
age the bad boy and govern your school successfully.
Send 25 cents for it at once to

CLAUDE J. BELL, PUBLISHER,
NASHVILLE, TENN.

Mention this journal.

Inspire Your PUPILS.

Opening Exercises for Schools

By a wide-awake teacher, contains Songs, Stories,
Recitations, Memory Gems, etc., which will DELIGHT
and INSPIRE your pupils. It will prevent tardiness.
Contains material for a nine-months' term. Send 25
cents for it to

CLAUDE J. BELL, Publisher,

Mention this journal.

Nashville, Tenn.

\$4.20 FOR \$2.10

Another Combination Offer that Means Something.

BIRDS AND NATURE one year\$1.50
*Ten Back Numbers BIRDS AND NATURE 1.50
60 Colored Pictures from BIRDS AND NATURE..... 1.20

The total amount of value.....\$4.20

**ALL FOR
\$2.10**

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to
nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures
of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"It is one of the most beautiful and interesting publications yet attempted in this direction. It has
other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little
magazine abundant prosperity."—*Chas. R. Skinner, State Sept., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."
—*Dr. Elliott Coues.*

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial recep-
tion."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls
of my rustic retreat, 'Slab Sidea.'"—*John Burroughs.*

"When one considers the low price at which you sell **BIRDS**, the number and excellence of the plates are
surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it
so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of **BIRDS AND NATURE** may be substituted for the ten back numbers.

A sample of this magazine and of **The Review of Education** for a dime and
two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

FIVE GOOD EDUCATIONAL JOURNALS

At this time teachers subscribe for their school papers for the year. You can't do better than to take some of these :

1. **The Review of Education.** (Formerly *Child-Study Monthly*.) An Educational Review of Reviews. 10 cents a copy. \$1 a year. It is to the teacher what the "Review of Reviews" is to the busy man—what the "Dial" is to the lover of good books. A guide to the progressive teacher's reading. THE REVIEW OF EDUCATION contains 48 pages, 8x10 inches, each month, supplemented with two of our exquisite color plates of birds. THE REVIEW OF EDUCATION does not seek to compete with its contemporaries, but rather to supplement them all.

2. **N. E. JOURNAL OF EDUCATION ;**
Weekly ; \$2.50 a year.

Teachers need the help which the JOURNAL can and does give. Among the prominent contributors for the coming year are Dr. Wm. T. Harris, U. S. Com. of Education, Richard G. Boone, Ph. D., B. A. Hinsdale, LL.D., N. C. Schaeffer, Ph. D., J. T. Prince, Ph. D., George H. Martin, Arthur C. Boyden, Will S. Monroe, Aaron Gove, Prof. C. M. Weed, Sarah L. Arnold, Margaret E. Schallenberger.

3. **AMERICAN PRIMARY TEACHER; \$1.00 a year.**

Our list of contributors includes some of the most prominent teachers in this country. Among them we would mention the following: Sarah L. Arnold, A. C. Boyden, Clarabel Gilman, W. L. German, Pamela McArthur Cole, D. R. Augsburg, Adelaide V. Finch, Jean Halifax, Ella M. Powers, Lucy Wheelock.

4. **MODERN METHODS; \$1.00 a year.**

Our New Monthly.

The first number of this paper was issued June '97. It consisted of 32 pages devoted entirely to Methods and Devices for Elementary and Ungraded Schools, and fully illustrated. Be sure to examine this new paper before subscribing for any other.

5. **THE SCHOOL BULLETIN; \$1.00 a year.**

THE SCHOOL BULLETIN has just completed its twenty-third year. It has been edited from the beginning by that prince of educational editors, C. W. Bardeen, who is the Dana of the educational press, and his paper is the New York Sun of School journals. Twenty thousand teachers of New York read the BULLETIN regularly. If you are a New York teacher you can't afford not to take it. If you are a progressive teacher elsewhere, try it.

Any of these sent upon receipt of the price. Ten percent discount on any two or more to the same address, twenty percent on three or more.

A. W. MUMFORD, 203 Michigan Ave., Chicago.

Standard Literature for Schools

A Series of Choice Books for Class Reading and School Libraries.

AMERICAN HISTORY.

		List Price.	
		Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse-Show Robinson (Kennedy), No. 10	For 6th and 7th Years	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulwer-Lytton), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years	.20	.30
Rob Roy (Scott), No. 3	For 6th and 7th Years	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

CHAS S MOORE, SPANISH AND ROMAN HISTORY.

Alhambra (Irving), No. 38	For 6th and 7th Years	.12½	.20
Last Days of Pompeii (Bulwer-Lytton), No. 38	For 7th Year	.20	.30
Ninety-Three (Hugo), No. 18	For 7th Year	.20	.30
Peasant and Prince (Martineau), No. 48	For 6th and 7th Years	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (For Second School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (De Foe), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Robinson (Wyss), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne) (4 stories), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

Black Beauty (Sewall), No. 31	For 5th and 6th Years	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text	.12½	.20
Evangeline (Longfellow), No. 21	Full Text	.12½	.20
Five Great Authors No. 42	Each Selection Complete	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11		.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete	.20	.30
Silas Marner (Eliot), No. 43	Complete	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete	.20	.30

University Publishing Co., 27 W. 23rd St., New York City.

Cambridge Educ P 1271

THE REVIEW OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. NO. 9.
WHOLE NUMBER 71.

CHICAGO, APRIL, 1902.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment	321
Hidden Forces in Life and Education, Prof. M. V. O'Shea	327
What Is Truth? Prof. Henry S. Prickett	331
Our Chaotic Education, Prof. Paul H. Hanus	336
The Trend of University and College Education in the United States, Dr. William R. Harper	342
Method in Science Teaching, Prof. Louis Murbach	346
Manual Training as a Socializing Factor, Supt. Richard G. Boone	350
English Composition, Supt. J. M. Greenwood	353
Do Children Know the Alphabet? Prof. Wm. Warner Bishop and Prof. Frank A. Manny	355
Act the Truth, Dr. Andrew S. Draper	356
Work and Play, Alice H. Putnam	357
Book Reviews	358
Educational Articles in the April Magazines	360

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$9.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

Enclosed please find \$5.88, for which send me BIRDS AND NATURE for one year, also the 488 pictures, and, as a premium, "The Song of the Lark."

FRED J. HART, M. D.,

Barrie, Ont., March 14, 1902.

Industrial Pictures.

Size 6 x 9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,

203 Michigan Ave.

Chicago, Ill.

These same pictures serve also to brighten the "A B C of Birds" (\$1.00, Mumford) by Miss Mary Catharine Judd, and the merit of the book becomes doubly valuable through the authenticity of its bird portraits. The verses are called "nonsense rhymes" by their author, but they do not quite reach that level.

Mr. Edward B. Clark, already referred to, is also the author of "Bird Jingles" (60 cents, Mumford), a series of pleasant little rhymes for children about the more notable birds, with colored plates of the same sort used in his other work, commented on above.

"The Bird Calendar" (50 cents, A. W. Mumford) utilizes six of the excellent color pictures which have been printed in the volume called BIRDS AND NATURE, the several months being represented by a winged creature more or less characteristic. The snowy owl, for example, answers for January and February, and the red-headed woodpecker for July and August. In each case a description of the bird and an account of its habits accompanies the portrait, and the general effect is pleasing.—*The Dial*.

A. W. MUMFORD, Publisher,

203 Michigan Ave.,

CHICAGO, ILL.

Rinehart's Indians

"Apache Pappoose"

Is the name of one of those Rinehart Indians who have caused such a sensation. Certainly you know of them. Well, we have made arrangements with the publisher to furnish these beautiful Color Reproductions of American Indians to our readers, in combination with THE REVIEW OF EDUCATION, at a fraction of the regular price. These pictures are the

'RIGINAL RINEHART REPRODUCTIONS

From colored photographs, showing in detail the fantastic coloring, gaudy clothing, head dresses and ornaments of the following subjects:

- | | |
|--|--|
| 1 Chief Wolf Robe (Cheyenne). | 21 Chief Louison (Flathead) |
| 2 Chief Mountain (Blackfeet) | 22 Chief Josh (Apache) |
| 3 Hattie Tom (Apache) | 23 Chief Little Wound (Ogalalla) |
| 4 Chief Hollow Horn Bear (Sioux) | 24 Chief Black Man (Arapahoe) |
| 5 Chief Grant Richards (Tonkawa) | 25 Chief White Swan (Crow) |
| 6 Chief White Man (Kiowa) | 26 Chief Wets It (Assiniboine) |
| 7 Wichita Pappoose | 27 Apache Pappoose |
| 8 Sac and Fox Pappoose | 28 A Pair of Broncho Busters |
| 9 Broken Arm on Horseback | 29 Two Little Braves |
| 10 Chief White Buffalo (Arapahoe) | 30 Black Man (Arapahoe) |
| 11 Eagle Feather and Pappoose (Sioux) | 31 High Bear (Sioux) |
| 12 Ts-i-Do-We-Tsh-(Pueblo) | 32 Chief Red Cloud (Sioux) |
| 13 Brushing Against (Apache) | 33 Blue Wings (Winnebago) |
| 14 Kill Spotted Horse (Assiniboine) | 34 Chief Joseph (Nez Percés) |
| 15 Alice Lone Bear (Sioux) | 35 Chief Geronimo (Guyilaté) Apache |
| 16 Thunder Cloud (Blackfeet) | 36 Abane (Wichita) |
| 17 Three Fingers (Cheyennes) | 37 Chief Sitting Bull (Sioux) |
| 18 Chief Red Bear (Arapahoe) | 38 Annie Red Shirt (Sioux) |
| 19 Good Eagle (Sioux) | 39 Yellow Feather (Maricopa) |
| 20 Gov Diego Nalango, Santa Clara (Pueblo) | 40 Little Wound Chief (Ogalalla Sioux) |

Size, 7x9 inches

Price, 10 cents each

Any 12 for \$1.00 or the 40 for \$2.00

AS A SPECIAL OFFER

We will send you REVIEW OF EDUCATION one year and the above 40 pictures for \$2.50. The regular value is \$5 00.

THE REVIEW OF EDUCATION one year and 10 pictures, for \$1.20.

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago

————\$4.10 FOR \$2.00————

A Combination Offer That Means Something.

BIRDS AND NATURE (one year).....	\$1.50
REVIEW OF EDUCATION (one year).....	1.00
GAME OF BIRDS.....	.35
GOLDEN PHEASANT (Colored Picture).....	.25
LITERATURE GAME.....	.25
GAME OF INDUSTRIES.....	.25
TWENTY-FIVE PICTURES (From Birds and Nature).....	.50

ALL FOR ONLY
\$2.00

The total amount of value\$4.10

BIRDS AND NATURE——Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by color photography. It is the only periodical in the world which publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

"Certainly no periodical, and probably no book, on birds ever found anything like such favor with the public as **BIRDS AND NATURE**."—*Evening Post, New York*.

REVIEW OF EDUCATION——An educational review of reviews.

GAME OF BIRDS——Illustrations of popular birds, in colors true to nature, on 52 finely enameled cards 2½x3¼ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

GOLDEN PHEASANT——A beautiful Picture for framing. Printed in natural colors on fine paper 18x24 inches.

LITERATURE GAME——500 Questions and Answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

GAME OF INDUSTRIES——Educational—400 Questions and Answers on the great industries of our country. 100 cards, 2½x3 inches.

REMEMBER——A year's subscription to **BIRDS AND NATURE** and **REVIEW OF EDUCATION** alone amount to \$2.50. If you now take either magazine, or both, your subscription will be advanced one year.

A sample of both magazines for a dime and two pennies—12 cents in stamps. Send for Catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

————\$4.20 FOR \$2.10————

Another Combination Offer that Means Something.

BIRDS AND NATURE one year	\$1.50
*Ten Back Numbers BIRDS AND NATURE	1.50
60 Colored Pictures from BIRDS AND NATURE.....	1.20
The total amount of value.....	<u>\$4.20</u>

ALL FOR
\$2.10

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

✓ "It is one of the most beautiful and interesting publications yet attempted in this direction. It has other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little magazine abundant prosperity."—*Chas. R. Skinner, State Supt., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."—*Dr. Elliott Coues*.

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial reception."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls of my rustic retreat, 'Slab Sides.'"—*John Burroughs*.

"When one considers the low price at which you sell **BIRDS**, the number and excellence of the plates are surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of **BIRDS AND NATURE** may be substituted for the ten back numbers.

A sample of this magazine and of *The Review of Education* for a dime and two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

Enclosed I hand you American Express Money Order for \$..... in payment for bound volumes of BIRDS AND NATURE to January 1902.

CLARENCE M. BROOKS.

Keene, N. H., March 13, 1902.

I enclose \$12.00, for which send me five double volumes BIRDS AND NATURE, half morocco, and a set of the Tree pictures for BIRDS AND NATURE for 1902.

S. H. NEWMAN.

El Paso, Texas, March 15, 1902.

Enclosed please find Postal Money Order \$1.50 for one year's subscription to BIRDS AND NATURE, this to begin with the January, 1902, number.

KAMEHAMEHA PREPARATORY SCHOOL.

Honolulu, T. H., March 11, 1902.

~~We~~ We enjoy the magazine BIRDS AND NATURE more and more and look forward each month to its coming.

MRS. GEO. E. TUTTLE.

Minneapolis, Minn., March 15, 1902.

Enclosed you will find money order for \$..... for two years' subscription to BIRDS AND NATURE including seventy-five pictures as per advertisement.

MISS ELIZABETH WOOD.

Wu Chang (via Hankow), China, Feb. 11, 1902.

The journals are very satisfactory. The pictures alone are worth the price of the book.

LULU F. ALLABACH.

Lock Haven, Pa., March 14, 1902.

Nature books are excellent reading for the young, and one of the best of them this year is Mr. Edward B. Clark's "Birds of Lakeside and Prairie" (Mumford). The author has rambled over all of Northern Illinois, hunting birds with an opera-glass rather than a fowling-piece; and as a result he has a most interesting tale to tell at first-hand of birds and their haunts and habits. Sixteen illustrations in color, of a high order of merit, make the book a most desirable one.

Dec. 16, 1901 *Dial*.

TO BE ISSUED THIS SPRING.

THE TREE BOOK

By JULIA ROGERS, of Cornell University.

12mo. About 350 Pages. Price, \$2.00. Advance Order, \$1.00.

This valuable contribution to the popular literature of forestry will be illustrated with the instructive and beautiful pictures from our twenty-four Typical Forest Trees in Photogravure. These show the tree as it appears in nature; a view showing the characteristics of the bark and a view of the leaf. In addition there will be 200 drawings and other text illustrations.

This will be one of the most practical books ever published. It will be complete in itself, containing no technical terms that are not defined. It will not have to be used with some other publication to make the text intelligible. The members of Forestry Clubs and all interested in trees will find it a handy companion at all times.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

Beautiful Bird Calendar — FOR 1902 —

This is the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

This is an exquisite bit of color work. Each of the six pages of the calendar (9½x12½) has upon one side a beautiful picture of some bird—the owl, bluebird, warbler, red-headed woodpecker, passenger pigeon and blue jay—while on the reverse side is a full, authentic, interesting description of the bird. Each bird is not only colored to life, but the pose and surroundings are equally true to life.—*Journal of Education*.

WE WILL SEND ONE OF THESE CALENDARS FREE TO ANYONE SENDING US ONE
SUBSCRIPTION TO "REVIEW OF EDUCATION" WITH \$1.00

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

I happened to buy a copy of the January, 1902 number of BIRDS AND NATURE at a bookstore, and find that this is just what I have been looking for, for many years; not knowing that there was such a publication. Enclosed please find Money Order for \$2.10 for which please send me your combination offer which I noticed on the back cover of your January number.

FRANK W. WARHORST.

Rosedale, Cal., Jan. 29, 1902.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity of terms, opportunity for measurement, etc.

125 illustrations. 108 pp., 5½x8½ in. 75 cents.

A. W. MUMFORD, Publisher, - 203 Michigan Ave., Chicago.

CHOICE SUPPLEMENTARY READING.

SKYWARD AND BACK.

For first and second grades. By LUCY M. ROBINSON. Prettily illustrated, 101 pp., cloth, 30 cents. Stories of Natural Phenomena told for primary pupils. The subjects of The Earth, The Sky, The Air-Fairies, Queen Moon, Baby Buds, Busy Sunbeams, etc., as presented in this book, cannot fail to interest and delight the children.

CLASSIC MYTHS.

Greek, German and Scandinavian. Retold for second and third reader grades. By MARY C. JUDD. 165 pp., beautifully illustrated, 30 cents. Several of these myths are, for the first time, arranged for children who use the English language. They can be read and reread with interest and profit.

THE CHILDHOOD OF JI-SHIB THE OJIBWA.

And Sixty-Four Pen Sketches. By ALBERT ERNEST JENKS, Ph.D. Price \$1.00.

"It is a book about which I find it difficult to speak in moderate terms, for it is extraordinary in its truth—its faithfulness to nature. There are few people who appreciate Indian character as it really is, and very few who know how to express that character in written words. This you have done with a fidelity which delights me as it must delight everyone who really knows Indians."—Geo. Bird Grinnell.

"I have read it with great pleasure and I envy you your store of Ojibwa lore."—Ernest Seton-Thompson.

One each of these three books sent postpaid for \$1.00.

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago.

Greatest of all Tonics

Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—

Invigorates the Entire System.

Enclosed find \$10.00 for which please send me, by express, the five double volumes of BIRDS AND NATURE, half morocco.

CHAS. STEWART.

Alta, Cal., March 21, 1902.

SEPTEMBER VACANCIES We have direct calls from public, private, secondary, technical and Normal Schools, and colleges, for more than 1200 teachers and professors. New vacancies daily coming in. More good candidates needed. Seventeenth Year Book of 80 pages free. C. J. ALBERT, Manager, The Albert Teachers' Agency, Fine Arts Bldg., Chicago.

Your REVIEW OF EDUCATION has so improved of late that I am glad to continue it, and I enclose \$2.50, as per your offer for three years, ending Jan. '03.

Maitland, Ont., March 20, 1902.

MRS. ERNEST THOMAS.

NEW BOOKS

A Child's Garden of Verses

By ROBERT LOUIS STEVENSON
With a Special Introduction

Profusely illustrated by Miss Mars and Miss Squire, with 10 full pages in colors, 12 half-tone plates, and 39 drawings in the text. Cloth, cover in colors, 94 pages. For introduction — cents.

A book for the primary grades, simple in style, of wise observation, kindly sympathy, and fanciful humour, now for the first time available as a suitable supplementary reader.

The Sunbonnet Babies' Primer

By EULALIE OSGOOD GROVER

Illustrated with 94 plates in four colors, by Miss Corbett. "The Mother of the Sunbonnet Babies." Cloth cover in colors, 110 pages. For introduction, 40 cents.

For the primary grades. The quaint manner of the Babies, and the dainty colors of the illustrations will catch the eyes of children and interest them at once.

Norse Stories

By HAMILTON WRIGHT MABIE

With a Special Introduction

Illustrated with 10 full page plates by George Wright. Cloth, 304 pages. For introduction 40 cents.

For the fourth and fifth grades. These stories teach life as a tremendous fight. The heroes acquit themselves like men, enduring hardship without repining, doing work honestly and with a whole heart.

RAND, McNALLY & COMPANY

CHICAGO NEW YORK LONDON

Enclosed please find five dollars (\$5.00) for which please send complete set of unbound BIRDS AND NATURE of last five years.

JOHN POEY.

Peekskill, N. Y., Mar. 19, '02.

I find your magazine most interesting and helpful and I marvel at your being able to sell it at the price you do. The pictures of the birds are wonders of accuracy.

REV. C. M. ARMSTRONG.

Philadelphia, Pa., Mar. 19, '02.

Herein \$6.00 for which please send me fifty-four back numbers, \$5.00, and volume commencing Jan. 1st, being Vol. II for year '02, \$1.00, as per your offer in Vol. XI, No. 2.

V. A. ALDERSON.

Wausau, Wis., Mar. 18, '02.

I enclose \$5.10 for which please send me one each of the 488 BIRDS AND NATURE plates in natural colors.

HENRY JOHNSTON.

Edinburgh, Scotland, Mar. 10, '02.

The Review of Education.

VOL. VII.

CHICAGO, APRIL, 1902.

No. 9.

EDITORIAL COMMENT.

The people of our larger cities are coming to a full realization of the importance not only of obtaining good teachers and paying a fair salary but also of increasing the tenure of office beyond that of a single year, or even a shorter period of time. The only excuse for the removal of a teacher should be "for cause." It is of course proper that the teacher should be required to demonstrate his or her ability both to teach and govern before they are appointed for an indefinite period. It is unnecessary to repeat the arguments in favor of retaining a suitable teacher from year to year, for they are apparent to any student of child-life.

The situation in our country schools is even worse than it is in the cities. In this regard the following editorial in *Education* is very opportune:

One of the most serious questions relating to the well-being of the country schools is that of how to secure a more permanent tenure of office in the teaching force. Under present conditions the real object of the people—who have established the schools and maintain them by great sacrifices as expressed in heavy tax bills—is often absolutely defeated. The proper training of their children is rendered impossible by the interruptions and losses occasioned by frequent changes of teachers in a given year or even a single term. We know of a school where the children of one grade had five different teachers in a period of about twelve weeks. If the mere covering of so many pages of text-book lesson-getting is the whole of schooling this evil may not be serious. But if personal influence is an important factor, if system and plan and intelligent co-operation

between teacher and pupils, if orderliness and continuity of mental effort and impression are essential factors in the problem of education, then such repeated changes and interruptions greatly interfere with if they do not altogether defeat the main objects for which the people pay their money for the establishment and maintenance of the public school system.

The school authorities of Chicago have taken a forward step in the bettering of the school system of that city. Superintendent Cooley has recommended that the tenure of office of the teachers be considered practically permanent instead of electing the entire teaching force each June." He proposes to let the teachers understand that unless there is specific complaint against them they are assured of their positions." The *Chicago Tribune*, commenting on this proposition says:

There is no sufficient reason why the tenure of the public school teachers should be from year to year. There are many good reasons why it should not be so. Naturally the teaching staff should only fluctuate in size by normal expansions, and continuity in its personnel is the very basis of a harmonious and progressive plan of work. No teacher, however, has any guaranty against discharge at the end of the school year. While policemen, firemen, clerks and all other employes in the classified service of the city hold office permanently, the teachers, although they are the most numerous group and are among the most respected of public employes, are subject to arbitrary removal.

Their consequent uncertainty as to the future

has always had a demoralizing influence upon the school system. It has facilitated the exercise of pull, encouraged suspicion toward the board, reduced the prestige of the teacher's position and been a disturbing influence among the entire staff. In recognition of these facts Superintendent Cooley proposed to the school board management committee that hereafter teachers who had passed a certain probationary period should be subject to discharge only for cause and after four months' notice. The committee approved the plan and it will be recommended to the board.

If it is adopted Chicago will in respect to this matter align itself with a wholesome tendency in the same direction in public school management generally and with the established practice in higher educational institutions. If the further purpose announced by Superintendent Cooley, to make all new appointments strictly according to order of ascertained merit as shown on the waiting lists, is also carried out, the local school system should be free from the influence of "pull" both for entrance into as well as for continuance in its teaching ranks.

The value of the undergraduate courses of our universities and colleges was ably discussed at a banquet of those attending a recent meeting of the Association of American Universities, held in Chicago. The basis of the discussion was what a college should and can do for the business man. Dean Briggs of Harvard said:

A good many fellows get a business training in college in the management of college affairs. Some of the most successful men in commercial life who were students in Harvard have told me they first learned to know men in college. It is there a man first is tested by his peers. He is sized up by his associates. They look to see if he can do some one thing and do it better than the other fellows. It is in college that a man shows whether or not he can meet an emergency. It is there they find out whether there is stuff in a man. The trouble with lots of boys is that they never did anything the best they knew how.

Dean West of Princeton voiced the views of all when he said:

The four years of an undergraduate course is a good thing to make a man. It produces the best type. It gives him the best things to make him a man and makes his intellectual life safe. It is a wise saying that, "a man is educated by what he forgot and a man never can forget what he never knew.

President Butler of Columbia used these words in the course of his speech:

The changed character of business has produced a changed character of college course. The great industrial changes have left their mark on the college. The man at the head of the great corporation who never has secured the college training some day will realize that he has a void in his life. We cannot afford to let a man go out into the world without all the qualities that go to make up that typical American man and gentleman. His education must be on old lines modernized.

President Jordan of the Leland Stanford University spoke of Mr. Carnegie's experiences. He said:

In answer to the pamphlet issued by a Chicago man, I would say that better an unborn man rather than an untrained man. But every form of college training should be allied closely to life itself. It is a greater thing to graduate now than it was when we slipped through. The college course is being made more modern every day. It has kept step with industrial development. Andrew Carnegie told me recently that the foundation of his fortune was the employment of college men. It is the college man who will solve the great problems by induction, not by emotional reasoning.

The quarterly convocation of the University of Chicago was held March 18. Dr. Harper announced that during the winter quarter 1,305 women and 1,290 men had attended the university. This was an increase of about 28.4 per cent over the attendance during the same quarter of 1901.

The convocation address was delivered by Dr. Albert Shaw, editor of the *Review of Reviews*. The underlying theme of his address was the advantage gained by a young man living in the twentieth century world of co-operation instead of the nineteenth century world of competition. He said during the course of his address:

Science and union of effort are all more or less co-operation. Capital is not getting the better of flesh and blood. There never was a time when money apart from skill and human service was a great power. The gains produced by the efforts of the great financiers of today are as much again as the interest on their wealth would be if they idly put out their riches to reap such a gain. The man is superior to the dollar.

In the new co-operative order of things in the twentieth century we find professions changing from private to public callings. Just as the private guard in years past gave way to the municipal police, so will doctors sooner or

later become public servants. In such a new system more men would work on salaries and there might sometimes be less men for the amount of work that is to be done. But if three men can do the work of thirty the public at large will be benefited.

The old system of competition called for long hours. In the system of co-operation the workman who now spends eight or nine hours at his task may look forward to a working day of six hours, with more time for rest and the advantages which are open to him. In the future the control of our industries will be either in the few men whose wealth gives them power, in the city, state or nation, or vested in the workingmen. It is more consistent to think that in the future we shall see something of all three operating side by side.

Mr. John Simmons, a Boston capitalist, who died in 1870, ordered in his will that part of his property should be set aside for the founding of a technical or industrial school for women. He stipulated, however, that the property should not be used for this purpose until its value had reached one million dollars. It is said that the time has arrived when this provision of Mr. Simmons' will can be carried out, and that a charter has been obtained. The property will be transferred to the board of trustees. The aim of the institution, as announced by its officers, will be to "train leaders and teachers rather than simply to increase opportunities for elementary training, and to raise the standard of occupations open to woman:

The courses thus far contemplated include household economics, secretarial work, library technique, horticulture and landscape gardening, applied art and general science—the last for those who are preparing to study science and medicine. During the first year comparatively little time is to be given to strictly technical subjects. The program will be made up, on the other hand, of subjects which will prepare the students for specializing, and will include English, modern languages, mathematics, physics, chemistry, biology, physiology, hygiene, anatomy, geography, physiography, history, economics, political science, psychology, ethics and art. For those who cannot leave their occupation to attend the regular classes there will be evening extension courses and special instruction for Saturdays and vacations. The college will be located in or near Boston and the work of building will begin next fall.

The great necessity in the public school is to make the public appreciate in cold blood the indispensable features of the lower grades. We have appealed to sentiment long enough. We must press the facts home. The university commencement, with its hoods and gowns, is no more important than the morning when the poorest little urchin creeps timidly into the sub-primary school of the slums. A Marconi catching the faintest flutter of a signal shot out over a wireless sea is of less significance than the six-year-old child in the primary schoolroom to-day who will give the world some invention as far beyond Marconi's as his is beyond Cyrus W. Field's serpentine cable. There are a thousandfold more wonderful things in germ in the elementary schools of to-day than are being discovered by all the men in the laboratories of the world. Is this true? If so, how immensely important is it that these children have their full share of advantage? —*American Primary Teacher.*

Professor Victor Garwood, in a recent issue of *The American Conservatory Quarterly*, writes of the present day needs of the student of music. His words apply equally well to the student in other specialties. He says, in part:

The predominant idea in all modern systems of training is that the student shall be stimulated beyond mere receptivity into activity. It is not culture alone but power that is sought. It is the recognition of this necessity that has caused schools to place greater stress upon those studies which awaken action in the student. Manual training, athletics and the experimental sciences seem destined to crowd the ancient languages and the purely reflective studies into places of secondary importance in future education. The teacher of music is keeping pace with other educators. He realizes that his duties as an instructor are only half fulfilled if he does not prepare his pupils for the active expression of the art. It is not enough to become a thorough and cultured musician; it is not enough to play for one's own enjoyment. Everywhere, in literature, art and education, the "social" element is emphasized nowadays, and the music student must be trained to contribute to society. To do this with repose and authority he must achieve a splendid self-control which reveals no trace of self-consciousness or lack of confidence.

In an address delivered at the recent Chicago meeting of the Department of Superintendents of the National Educational Association, Professor D. L. Kiehle, of the University of Minnesota, read a paper on "The Practical Application of All Learning to Better Living." The address contained many interesting statements. Dr. Kiehle said:

Training along industrial lines is not the goal for women and their education. Until wealth brings its treasures from the shop and bank to the home in forms of use for the comfort of the family, until art learns to beautify the dwelling place of the family life as well as the cathedral and the capitol and until science devotes itself to the healthful rearing of children and the hygiene of the home, all these forces of our modern civilization, of which we are so proud, fall short of their highest service and that to which they were destined. And this final and noblest application of wealth and learning must be effected in the education of women. With equal rights to do what they may do in common with men, they must be permitted to continue their education in preparation for their higher duties of the home, which they alone are able to make and adorn. There is as much intelligence and good judgment required in applying science to the care of the home and children as to the care of the stock on the farm.

The annual report of the United States Commissioner of Education for the year 1900-1901 consists of two large volumes full of valuable information. Dr. Harris' reports, as a whole, are among the most notable educational documents issued by any government, and should be examined by every progressive teacher. Some of the subjects discussed in these two volumes are the development of English secondary schools for boys, education in Porto Rico, the system of public education in British India, educational extension in the United States, historical documents having a bearing upon common school education in the Atlantic and Central States of the South from 1830 to 1860, the struggle against alcoholism, the justification of the public high school. There are many other subjects of equal interest and all are discussed in complete detail.

Prof. Ira W. Howerth's course of university extension lectures, given in the cities of the Middle West between February and April, were a great success. Between each two of Prof. Howerth's lectures on the social problem he had some man of national reputation deliver one on a subject vitally connected with the problem. Among these prominent men we find Dr. E. A. Ross, Henry C. Adams, Walter A. Wyckoff, Harry H. Powers and Albion W. Small. Such a course of lectures leaves a community much richer in knowledge and in the ability to handle its own political and economic problems than a course given for entertainment only.

Dr. M. G. Boombaugh, Commissioner of Education for Porto Rico, states that "since the United States assumed control of affairs in Porto Rico there have been 835 new school buildings erected and 60,000 pupils enrolled, while hundreds of thousands are clamoring for admission. A firm financial basis for a school fund has been established, so that within eight years under the present system there will be a seat in a schoolhouse for every child in Porto Rico. Normal schools are being established for the purpose of introducing native teachers who can speak the English tongue, and there are now more than 500 teachers of this sort employed."

The Council of Public Instruction of Spain, in a report recently issued, gives the following interesting statistics: In the forty-nine provinces of Spain there are 25,348 public schools. Of these 9,313 are for boys, 7,612 for girls and 8,423 are attended by both sexes; 1,617,314 children attend these schools. There are also in Spain 6,181 private schools, which are attended by 166,880 boys and 177,500 girls.

Professor G. Stanley Hall criticises the dead languages as taught in the curriculum of the high school. He speaks of them as "baby Latin and baby Greek." He says:

These languages of Latin and Greek as they are found in our high schools are but a sanctified relic—a ghost of a ghost. There is almost every degree of degeneration from the golden age of secondary classical training. Booker T. Washington says the two chief desires of the colored youth during all the reconstructive period were to hold office and study Latin, and that his life work for his race has been directed against these two evils. I raise no question of the value of these studies for those who go deeply into them. But what keeps them alive? Only this traditional respectability.

Principal Fisk has taken an extreme but not illogical stand against cigarette-smoking students. In asking those who cannot or will not give up the habit to leave the Northwestern preparatory school he is acting for the general good, not only of the smokers, but of the institution. Boys who habitually use cigarettes, or tobacco in any form, are seriously handicapped, and their backwardness reflects on the general average. Cigarettes and study, so far as boys are concerned, will not mix.—*Exchange*.

The New York State school law provides that every school shall own and fly a United States flag. The law was getting to be somewhat neglected in some sections of the State, and an order was recently issued to two hundred and seventy-five districts to purchase flags and the necessary appliances. Neglect on the part of school officials to comply with this order renders such officials subject to removal from office, and requires the forfeiture of a portion of the school money.—*Exchange*.

Dr. Paul H. Hanus, of Harvard University, in an address on "Obstacles to Educational Progress," delivered at the superintendents' meeting, said:

For more than twenty years the system of study in primary grades has been faulty and unsatisfactory. Let us have more intelligent and rational experiments in educational methods. We have not yet organized our educational doctrine; we have only formulated it piecemeal, and we have not organized our educational experience; we have not gathered the fruits of experience as we have gone along.

The Iowa Reading Circle Board has selected the following books for reading during the coming year:

White's "Art of Teaching." American Book Company, Chicago.

Wray's "Jean Mitchell's School." Public School Publishing Company, Bloomington, Ill.

Welch's "How to Study." W. M. Welch & Co., Chicago.

Hodge's "Nature Study and Life." Ginn & Co., Chicago.

"School Sanitation and Decoration." D. C. Heath & Co., Chicago.

The teachers of Des Moines, Iowa, recently held a week's professional institute. Dr. Wilbur S. Jackman, of Chicago, was the principal speaker. Prof. Jackman is one of the ablest and most interesting speakers on nature study in America. This old world takes on a new interest and assumes a new aspect for those who have listened to Prof. Jackman for a week.

Dr. Alleyn Ireland has been appointed to the professorship of colonial politics, history and commerce recently established by the University of Chicago.

The University of Chicago is holding a series of university extension conferences in the larger cities. One was held in Pittsburg March 21-23, and arrangements are under consideration for one to be held in Iowa in the near future.

Mr. Booker T. Washington has been chosen the class speaker for the commencement exercises of the University of Nebraska.

Superintendent H. E. Kratz, of Sioux City, Iowa, who was drawing a larger salary than any of the other Iowa superintendents, has resigned. It has not been definitely announced what new work

Professor Kratz will undertake, but it is generally understood that he has been offered something much better than the position he leaves.

The meeting of the Department of Superintendents of the National Educational Association, which was held in Chicago in February, was the best attended of any meeting that this branch of the National Association has ever held.

All of the instructors in the public schools of Minneapolis have announced their intention to become members of the National Educational Association, which meets in that city in July.

HIDDEN FORCES IN LIFE AND EDUCATION.*

By M. V. O'SHEA,

University of Wisconsin.

From the earliest times people have realized that the mind of the child is not a very faithful reporter of things as they happen in the world; they have appreciated that it is very easy for children to see crooked and hear crooked. This fact is being impressed upon the thoughts of people to-day by the results of investigations relating to the suggestibility of the young. Studies conducted at Clark University, and elsewhere, during the past few years, have shown that the child mind is easily deceived under conditions which exist about it all the time. If an experimenter leads a group of children to think that he going to test the sense of smell with familiar odors, he can without difficulty get most of them to detect in distilled water some perfume he names and with which they are familiar. So, too, he can make them believe that they are tasting salt, sugar, or the like when he places a perfectly tasteless substance upon the tongue. Objects may be seen to move that remain perfectly stationary; and illusions of temperature, touch, and so on, are easily induced. The principle involved here is illustrated frequently in the experiences of daily life. Few people can detect misspelling in a word if the first and last parts are correct. It is well known that the majority of persons cannot be trusted to discover typographical errors in proof. Now the rationale of these things is apparent at a glance. We tend to see things in adult life as we have seen them before, even though they are somewhat altered in the present instance. Seeing for most of us is at least part imagination in the sense in which this term is commonly employed. We behold that

which arises within rather than that which is presented from without. If in a word there is enough of the old form to awaken the memory of the word we are likely to take the memory to be the thing which is appealing to our senses.

Fortunately the human mind has been so constructed that it joins experiences together in memory in the way in which they originally presented themselves. These constitute series of events; and if they are repeated a few times in the same order we come to believe that this order is permanent, that it indicates the way in which the world will always present itself to us, and we conduct ourselves accordingly. If a certain number of events as A B C D E have been repeated in that order a few times, then when A is presented I expect B will follow, and C will follow B, and so on. I do not wait for each member of the series to present itself before making up my mind what to do. As soon as I experience A I conduct myself according to past experiences and I am more or less indifferent to the events as they actually occur on this occasion. I am not critical of what is offered from without now, I do not need to be. Nothing new will happen, I think, and what is the use? If I was placed in a situation which was unfamiliar then I would be anxious about everything. My welfare would, of course, demand that I take strict account of all happenings, but when I glance at a word and see, say, half the letters arranged in the way in which I have seen them before, I do not stop to observe each letter distinctly, so I jump to the conclusion that it is a familiar word.

It is very fortunate for me that I do

*Abstract of an address delivered before the California Teachers' Association, and published in the proceedings.

this since I am spared much useless pains in observing details of things that I know perfectly. But there is no great good without small loss; I sometimes fall into error. In language this is usually not of much account, but in some of the other affairs of life this tendency, not infrequently, usually leads into serious consequences. A child having made a friend of his kitten and gained its confidence so that he may do what he will with it without suffering penalty, falls in with a dog and sees so much likeness to his home pet that he thinks he can treat him the same way, and sometimes he suffers severely for this lack of discrimination. And so instances without limit might be mentioned showing how easily old associated experiences are revived by any present event. Usually, to repeat, these revived experiences will be in accord with reality, and would probably always be if it were not that series of experiences cross and recross in a most complex way, and at the junction places there is likely to be shunting off so that the parts of two different series get connected together as a whole in the mind, but there is nothing in the outer world to which this corresponds, and so our thinking leads us astray.

This principle is true in respect of the influence of language upon perceiving and thinking. When one hears a word there is reinstated in his mind the content with which it has been coupled on previous occasions. Then in many people's minds this content is taken to be a truthful report of reality and conduct is regulated in view of it. When an experimenter tells a blindfolded subject that he is going to touch the skin with a hot rod and then informs him that he is about to do it the words are likely to revive heat sensations so vividly that for all intents and purposes they are actually experienced. Of course, daily life supplies us with innumerable examples of this principle; oftentimes public exhibitions are given showing this law in its extreme form. In hypnotism the critical faculty is momentarily paralyzed, so to speak, and any previous experience which can be revived in the

subject's mind through language or through gesture will be interpreted by him to be reality, and he will behave accordingly. The point is that old mental states with their accustomed motor expression are reinstated through a revival of one or more factors in the series of events which comprise the experiences.

Now, the young mind is especially inclined to have reinstated old experiences in any present situation presenting factors which constitute a part of the old series. We say childhood is a time of fancy, and we mean by this that it is a period during which the critical faculty is not so active as it is later. The mind is not so good a mirror, if you please, of the world without. It makes a start at the point where reality is largely internal, as it were, and grows along up to where in the most perfectly developed stage the riot of imaginative combination is inhibited by external realities. The mind at first is apt to see the world through its fears and desires, and this tendency is doubtless never wholly overcome, but it is restrained with normal growth. The child jumps at things, as we say; he takes things for granted. He reads his thought out into nature. Reality to him is what has gotten into his mind in one way or another through story-telling and the more or less helter-skelter association of things that have never been connected together in the world without. Growth implies in a certain sense the straightening out of these influences and the establishment of definite series of events corresponding to the way in which the world is ordinarily presented.

Well, this manner of the world's action accounts for much of the error in thinking and perceiving of the adult as well as the child. One learning to read in his mother-tongue or in a foreign language mistakes words that look somewhat alike. If a child knows "rat" and looks at the word "cat," the former picture of rat is likely to be revived. Adults miscall words that resemble each other for the same reason that one who has not associated much with Indians or Chinese think they all look alike. Perception in any new field always singles

out prominent likenesses and only later comes to the details which distinguish individuals. If one will reflect upon it this is really the only plan of construction of mind which could make it an efficient instrument for learning the world. Of course, it goes astray at times, but on the whole it seems to be the best scheme that could be devised. Errors of this sort are outgrown as the mind becomes more critical in any field, amasses a larger number of facts in that field, which will constitute means of apprehending the details which mark off one thing from another thing possessing the same general characteristics.

Someone has said that a person always finds what he is looking for. What you expect to see and hear will be likely to come your way, at least as far as you are yourself concerned in your beliefs. One who anticipates that another is going to slight him will be only too apt to be slighted in his own estimation at any rate. In passing graveyards people see ghosts because they are expecting to see them. In the stories which have been told them ghosts and graveyards are usually connected together, and they are almost certain to arise together in the mind in later life. Expectation really means, from one point of view, that internal images are attaining a certain vividness which may go so far as to be taken for reality. Anticipation is the initial stage of happening for the one who anticipates.

Much of children's misrepresentation of the world is due to this tendency to be real what has been put into their heads through stories. Bears and forests get connected together so that when any forest is seen the bears often make their appearance too. Sully cites a number of instances showing the action of the child-mind in the presence of any natural object which has been misrepresented to the child on previous occasion; it sees before it the distorted thing which had previously been put into the mind.

In the most complex affairs of life this tendency amounts to prejudice. People see things colored by their fears and their desires. What one fears is apt to become so permanent and exalted in his

mind, to gain such strength, that it dominates his thinking. It is not properly held in check by the data derived from the activity of his senses or by the outcome of rational thought. It simply runs riot, and, of course, alienates him from his environment. So what we desire greatly is only too apt to prejudice our vision. The way we would like to have a thing happen we are only too ready to believe that it has so happened. What will minister to my interests very easily appears to be the right thing, the truthful thing, the just thing. Many of us confuse the feeling which the attainment of truth gives with the feeling of personal advantage, and the feeling of untruth with that of personal disadvantage.

Let it be said in passing that there is no work of education so important as developing the power of inhibiting the influence of fear and desire upon one's thinking. The highest stage of mental development is reached when the mind is a faithful reporter of the world as it is, then conduct will be regulated to the advantage of the individual and of society. If we should in all educational work make the pupil self-active, lead him to observe and come to right conclusions based upon his observations; if we should stimulate in him the tendency to consider another's point of view in all differences of opinion, we should, I think, encourage the growth of a mind where native impulses to distort the world to suit selfish ends would be restrained, and the power of unprejudiced vision would be exalted.

I have spoken thus far only of that aspect of suggestion which sometimes leads to error in our perceiving and thinking; but there is another and more important phase of the subject, the phase to which modern science has given chief attention, and which relates to the motor character in conduct of all thought and feeling. Modern science is thoroughly assured that every mental state realizes itself in some sort of motor activity. One scientist says that every thought has a motor aspect; another says that the child thinks with his muscles. Still another declares that the world comes

in through the eyes and ears, and runs out through the hands and feet and vocal organs, but all agree that however an idea be awakened it yet issues sooner or later in appropriate activity. One could easily observe this principle operating in his own life. What he dwells upon in thought he usually embodies eventually in conduct, unless the natural course of events is inhibited by opposing ideas and actions. Let anyone, as Baldwin has said, fill his mind up with the thought of moving his hand and he will see how clearly joined it is to motor action. If he will think the matter over he will see that human life could be constructed on no other plan. If one could act one way and think and feel another, what sort of a life would he live, anyway? "Out of the heart are the issues of life," indeed.

And there is a special phase of this question which is of particular importance. In the past people have thought that if one could only hold a negative thought in the mind it would restrain wrong action. One may think "I will not do this," and he will be restrained from doing it. But we are seeing to-day that much thought of that sort is really positive in its effect upon the conduct. When you think of not doing a thing, what are you really thinking about? Suppose you extend your hand and think "I will not move that hand," and think as hard as you can of just that thing and see what will happen. Try riding a bicycle and getting your mind on the thought of not running into a tree in your path, and see what will happen. Try visiting a mesmerist, and when he asks you to come out of your seat, keep your mind on not going and see again what will happen. If you have never thought of this matter, these tests will teach you that what you have called a negative idea is really not negative at all in most instances. It is negative only in the verbal, not in the real sense. Thought is made negative when it is forced out of attention by other ideas. As long as it holds the attention it struggles to realize itself in accustomed action, and if it can hold attention long enough and overcome opposing ideas, it will be almost certain to run its course.

One must have observed in his own life how, when he has acquired the habit of doing a thing upon a given stimulus, as going to bed when the clock strikes ten, he comes after a while to do the thing automatically. When the inciting stimulus, which was originally conscious, is now experienced you go off like a machine for all practical purposes. A telegraph operator can sleep through all sorts of noise but awakens immediately when called by his instrument. A mother sleeps in the midst of a racket, but awakens at once when her babe calls her. Modern science is showing us that a great deal of our conduct is determined by sub-conscious stimulations tending to operate now as they have operated previously; anyone who is interested in the subject will find no end of instances to illustrate the principle.

There are very important educational doctrines that grow out of these principles of human nature. To state a great deal in a word, conduct is determined by the sort of stimulations you present to one. Having an end to attain one will then seek to bring all possible forces to bear upon the individual in a positive way so that he may react in a positive manner calculated to attain the end. Our chief problem in education is to stimulate good and restrain evil conduct. In the past men have placed their faith largely in the direct suppression of evil; "thou shalt not" has been the principal means of discipline. But we are seeing to-day that the most effective means of inhibiting evil is not so much by verbally negating it, so to speak, as by supplanting it by good conduct. In modern times, though, we are realizing that the human being is endowed with a given amount of energy which is almost certain to express itself in some direction, and the great problem of education is to direct this energy. Character really means the establishment of good conduct rather than the suppression of bad conduct, although if we attain the first end we will attain the latter, but the reverse of this statement is not always true. I think we are coming in modern life to put the chief emphasis upon positivism in shaping the lives of the young, not alone in the school, but in the home, in the

church, and in society. The reformatory is taking the place of the prison. Interesting, vital studies are replacing the cane and the birch. Playgrounds and amusement halls are rendering jails less needful. Y. M. C. A. buildings are reducing the number of young men who live in saloons. But there is a great deal yet to be accomplished. Law makers have not yet realized their full responsibility; if they had they would devote more attention to studying ways of guiding young people in a wholesome way rather than in punishing them when they have sinned. The church has not realized its full responsibility; if it had it would attach more importance to the positive and less to the negative life. It would lead people to think more upon the good than the bad in them. "I am a miserable sinner, and there is no life in me" has become too prominent in the teachings of the church, and it is strange that people have not realized this, as it touches the practical life, since they believe apparently that "out of the heart are the

issues of life," and "as a man thinks so is he."

The great secret of training, in my opinion, lies in the ability of one to direct, to guide, to transform evil into good; to suggest ways of right action which will turn energy out of wrong channels; to hold up ideals which will be attractive and stimulate the young to realize them in their own conduct. To present strong, vigorous personality for emulation, a personality which will be positive and not negative, which will make one think of what is upright and worthy and wholesome, rather than the opposites. We need to put into effect in education everywhere that prayer which we all utter daily, "lead us not into temptation, but deliver us from evil." We need in the same spirit to follow the injunction of the apostle of old who urged men to think of things that were good and true and pure and beautiful because these would surely realize themselves in their conduct.

WHAT IS TRUTH ? AN ADDRESS TO COLLEGE STUDENTS.

By HENRY S. PRICKETT,

President of the Massachusetts Institute of Technology.

I welcome these meetings,* where, as members of a brotherhood, we discuss frankly some of the larger philosophical ideas which interest the whole world. And this not simply for the reason that they bring me into face-to-face relation with you, but also because these discussions serve to remind us that the college life is a part of the life of the world, and not a life isolated from it.

Last year I called your attention to this thought in speaking to you concerning the relations of a citizen of a free State to the Government. At that time we had some discussion of the methods which

the Government employs to conduct its business, of the precautions which it adopts to secure honesty and efficiency in its officers and employees, and of the opportunity which the government service of our own country offers to educated men.

To-day I wish to speak to you concerning the relations of citizens to one another, and concerning the guiding principle which ought to govern men in order that these relations may be the best, not only for the individual, but for the State as well. And in the outset I remind you again that the college education, if

*One of a series of talks before the Sophomore Class of the Institute of Technology and condensed from an article in *The Outlook*.

it be really an education, ought to count in preparation for life, and that the college and the life you lead in it is a part of your life in the world.

In what way, may I ask, does your education in applied science help to the adjustment of these relations, and is there in the study of science that which serves to fix a guiding principle of life and of conduct?

I believe that there is such a principle to be found in the studies which you pursue. I go even further and say frankly that if your scientific studies furnish you no suggestions in these matters, if your education here does not connect itself with any philosophy of life and of conduct, if it has not strengthened your moral purpose and helped also to clear your conception of truth and of duty, then you have caught only the husks of science, the grain has slipped through your fingers; you have acquired, not education, but training.

But in what way does the scientific education minister to the right interpretation of our duties in the social order in which we find ourselves?

My answer to this question is this: The scientific method of study is characterized rather by a distinctive attitude of mind to truth than by any new machinery for collecting facts. The scientific method insists that the student approach a problem with open mind, that he accept the facts as they really exist, that he be satisfied with no half-way solution, and that, having found the truth, he follow it wherever it leads.

But I can understand the questions which such statements immediately raise in your minds. In science, you say, one can know the truth. In the chemical or in the physical laboratory one can compare theory with exact tests, and know whether his results be true or not; but one has no such criterion for judgment in social and moral questions. How is one to know the truth in such matters in order that he may follow it?

I can well imagine that many of you, coming, as you do, from distant homes to a strange city, taking up as you must new duties amid new surroundings, find yourselves constantly in the presence of new

conceptions of duty concerning these matters of every-day life. Some of the things which you have been taught to look upon as wrong you find done by those in whom you have confidence. Some of the things which you do are not in accord with the views of your companions. And as you observe this difference of opinion concerning those things which men consider right in their relations with other men, I can well imagine you must now and then ask yourself the question, "What is truth?"

Now, I do not pretend to be able to tell you where truth is. Perhaps my position is somewhat like that of the small Swiss whom I met on top of the Gemmi Pass, and of whom I asked the question, "Where is Kandersteg?" "I don't know," said he, "but there is the road to it." And although each of us finds truth for himself, if he find it at all, nevertheless I may be able to point out some things which will mark the way to it, whether you take one path or another.

In order that a man may reach truth, and having reached it make it effective, at least two qualities are necessary. One is what we call moral sense, earnestness of purpose, desire to do that which is true. The other is intellectual clearness, the ability to think. And the result which a man accomplishes is in large measure a function not of one but of both of these qualities.

The world's history is full of the story of men who had one of these qualities and who failed by lack of the other. It is difficult to say which has done the greater harm—blind devotion which would not see, or intelligence which saw but lacked purpose and moral courage. Each has at one time or another filled the world with crime and suffering.

And so, although no man can point out to you the way of truth, although that path is one which each one of you must find by his own effort, to walk in this path you will require not only moral earnestness, but intellectual clearness; one must not only feel right, but he must think straight; he must have not only sentiment but sense.

But you will say that even those who unite moral purpose with intellectual

alertness, those who appeal both to conscience and to intellect, even those men do not agree in their attitude concerning what is true in moral and in social questions. Such differences do exist among earnest and thoughtful men. No doubt these differences at times confuse the minds of those who are beginning to think on such questions.

We have had in the daily press for two months past an illustration of such difference of view in a discussion concerning what is usually called the drink question. Now, no earnest and no clear-headed man can fail to realize the misery and the crime which go with the misuse of alcoholic liquors; but the discussions to which I refer brought forward at least three distinct opinions as to the way in which this abuse should be dealt with.

One group of men believed that all social drinking of wine is wrong; and that such drinking should be prohibited by law, as other crimes are prohibited.

A second group held that, while wine-drinking was in itself harmless, nevertheless the danger of misuse is so great that all good men ought to abstain from wine and discountenance its use by others.

A third group took the ground that the question was one for each individual to settle for himself; that truth required the admission that a large number of those who drink wine use it in a rational way; that temperance and truth lie along the same path; that the real lesson which mankind has to learn is the lesson of self-control and of rational living.

It is not my purpose to discuss any of these views, all of which have been earnestly and conscientiously maintained. But the point to which I wish to call your attention is this. The question whether you accept the one or the other of these views is comparatively of small importance. But it is of infinite importance to you that, in these and in similar questions, you find your own conception of the truth, as conscience and mind direct; and, having reached a result, that you have the courage to follow that conception wherever it leads. It means little for you to accept my view of truth or

any other man's view of truth. It means everything to you to determine out of an open heart and an alert mind your own conception of truth, and, having done this, to keep the courage of such conviction. And if your training in science is to have any deeper meaning, if it is to connect itself not only with the problem of making a living, but also with a real philosophy of life, then the habit of open-mindedness which you have been trained to use in science, this scientific method, as it is called, is also the attitude of mind in which you should approach all questions.

There is a feeling sometimes that too much truth is not a good thing, at least for men between the ages of nineteen and twenty-four. And sometimes, when one's conceptions of truth, particularly in social and moral questions, lead directly across the conventional and traditional lines, one is tempted to ask whether, after all, it is not better to fall in with the view of other men and travel their road. All men of serious purpose, whether their lives be passed in the public view or not, face this question at one time or another, for all men who have earnestness and intelligence become leaders in greater or in less degree. In such a moment of hesitation there is one voice which speaks down the centuries—the voice of one greater than Marcus Aurelius, greater than philosopher or poet or priest, whose utterance is so clear and so straightforward that it brings courage to doubting souls and shows the way for timid hearts. That voice says, "Know the truth, and the truth shall make you free." My brothers, there is no other freedom worth the having other than that freedom which a man enters into when he follows truth as his own heart and his own mind enable him to see it.

There is another quality of the mind which ought also to enter into one's attitude toward truth, and which is characteristic of the scientific spirit and of the scientific method. This quality is tolerance. For how strong soever one feels himself to be in purpose, and how sure soever he may consider his conception, other men just as sincere, possibly as able, will discern truth in a different

direction and approach it by a different path. No man, no party, no sect, and no religion has a divine monopoly either of truth itself or of the ways by which truth may be found. History is full of the story of those who parted, the one from the other, each to follow truth as he saw it, to find that their divergent paths came, in the end, to the same destination.

I remember one summer night watching from a hilltop two men making their way across a low, swamp meadow to a farmhouse beyond. There had been an accident on the railway and they were hurrying for assistance. One of them had removed the headlight from the locomotive and was using it to find a pathway; the other had only a brakeman's lantern. I observed that the man with the headlight went straight forward to his destination, directly across the shallow streams which intersected the meadow; while he with the lantern wandered back and forward, tracing out the meanderings of the little streams, sometimes even going directly away. But at last he too came to the farm-house, and, when he was questioned as to these wide detours, explained that he found it necessary to go around the heads of the streams which intersected the meadow. In truth, the streams were only a few inches deep, and the safe and direct way lay directly across them. This he with the headlight had discerned, and by so doing had accomplished quickly and easily what the other came to after long and wearisome seeking. Yet both sought the same goal and both reached it.

It is in some such way that men with different training and different equipment arrive after all at the same truth by widely different paths, and after different expenditure of time and labor. The personal equation enters into our judgment of truth as it does into all human thinking. It is no part of the scientific teaching to deny to another the same freedom in the search for truth which he himself claims. The scientific man of all others should be tolerant.

This does not mean that the scientific method excuses a man for his failure to use all the means in his power to come

at the truth. It does not forgive a man when he seeks in a devious way that which he ought to reach by a direct road. It does not hesitate to criticise a man who uses a lantern when he might employ a locomotive headlight.

The principle that free expression of opinion is conceded to those who differ from the recognized authorities is a lesson which individuals and parties, societies and nations, have been slow to learn. This right, so far as social, political, and religious questions are concerned, is limited to-day by curious social and geographic lines. It is the boast of our Anglo-Saxon stock that political and religious freedom has found its fairest fruitage in Anglo-Saxon civilization. We who live under a regime which guarantees to each citizen freedom of thought and of speech do well to recall now and then the mistakes and the difficulties through which our fathers came to learn this lesson. It is a story full of the weaknesses and of the strength of humanity; a story of progress step by step, with many halts and backward steps; a story of cruelty and of devotion; of the blindness of the many and of the clear vision of the few; but a story always of human progress toward truth.

For the desire to compel other men to accept one's own view of truth has been confined to no class and to no age. It has been a very human characteristic since the days when men lived in caves and dressed in skins.

Boston Common, scarce a stone's throw from this room, lies to-day white and fair under last night's snowfall. As we look upon it our memories go back to the days of 1775, and to those later scenes which preceded the Civil War. We think of Boston Common as sacred to liberty and to freedom and to the rights of man; and I believe there is no spot on earth more truly dedicated to human freedom. Yet it has beheld other scenes than gatherings of indignant colonists or groups of patriot citizens anxious for their country's future. Our thoughts seldom go back to that October morning in 1659 when William Robinson, Marmaduke Stevenson, and Mary Dyer were led out on Boston Common

to be hanged for teaching the doctrines of the Quakers. It is not easy for us at this day to realize that men and women could be hanged on that free soil for rejecting the doctrine of original sin and of the resurrection of the body, for denying the efficacy of baptism, and for asserting the absolute right of private judgment. And I remind you of this scene, not to compare our liberality with the narrowness of our fathers, but to call your attention to the fact that by their very earnestness of purpose and by their examination and discussion of religious questions the fathers found the path to truth, though long and rough; persecution gave way to tolerance, and a colony founded to perpetuate a special view of divine truth became a State where any man may follow truth as his own heart and his own mind direct. And this ideal is, after all, that toward which great souls have labored in all ages. For this scientific method is no new invention of the nineteenth century. The men who have led humanity have always been those who went forward with open hearts and with clear minds. For literature and science and politics and religion are not separate and distinct things, but only different parts of the same thing; different paths by which men have sought after beauty and truth and righteousness—and these are one.

Therefore let me hope that your study of science may mean something more to you than the facts of chemistry and of physics which you learn in the laboratory. And, if I may be remembered by you when you have left these halls, I would

choose to be remembered as one who taught you to approach the problems of your duties and relations with men in the same spirit in which you approach a problem in the laboratory—to be content with no lie, to rest in no evasion of the truth; to work out, with the help of a tender conscience and an alert mind, your own conceptions of truth, and, having reached such conceptions, to follow them. And this is the answer to my question. We know truth when we reach it of our own effort and make it our truth. The politics and the religion which a man inherits, without thinking and without effort, count little toward his political and spiritual development. Men differ, and will always differ, as to what truth is in this or in that matter, but that man finds truth who seeks it; he serves truth who follows it fearlessly; he serves his fellow-men who does all this with humility and with tolerance.

In the church service of to-day is preserved a short prayer: "Grant us in this world knowledge of thy truth, and in the world to come life everlasting." It has come down to us from one of the heroes of the early Church, him whom men called the golden-tongued; one who, after a life of devotion and of courage and of tolerance, died at the hands of ignorance and jealousy. The words of this prayer, few and simple as they are, seem to me to ask all that a human soul can ask—in this world knowledge of God's truth, in the world to come the life everlasting. The educated man, the courageous man, the tolerant man, has no other prayer.

OUR CHAOTIC EDUCATION.*

By Professor Paul H. Hanus.

Why is it that, after about twenty years of unparalleled interest and activity in education in this country, there is still so much vagueness about our aims, so much indecision about adapting means—programmes and methods—to ends and so much uncertainty about our results, that even today we still seem, as of old, “always bound nowhere under full sail?” The discussion of this question leads naturally into the recent history of attempted reforms in school programmes or “courses of study.” This history is quickly told. About twenty years ago the elementary school programme, with its narrow content and overwhelming emphasis on the school arts—reading, writing, arithmetic, and English grammar—was seen to be inadequate and formal. It provided some acquaintance with the school arts themselves, but afforded little real education. It prepared for an elementary education, but did not furnish it.

Accordingly, more than a dozen years ago we began to increase the scope of elementary school programmes. We sought to improve them by “enrichment.” To the school arts, the formal studies, we added “content studies”—literature, history, nature study, an improved geography; to the narrow field of the traditional arithmetic we added elementary algebra and geometry; we laid more stress on the drawing, music, and physical training, already represented in the schools’ occupations; and we introduced manual training and occasionally a foreign language. But the result was far from satisfactory. We had become convinced that enrichment was necessary, and had acted on our conviction. But the enrichment had involved us in new difficulties that proved to be formidable obstacles to progress. Our programmes were congested, especially in those por-

tions of the new programmes most affected by enrichment—the earliest and the latest pre-high-school grades. The middle ground was and remains, justly I think, though perhaps not always intentionally, the territory where the school arts are supreme.

Then it seemed that the elimination of non-essentials from the old programmes would solve our difficulties. Such elimination, it was asserted, must precede and accompany enrichment—which was true. It was also announced, with something of flourish and a good deal of insistence, that “correlation” would accomplish the rest. Correlation was interpreted to mean such a grouping of the subject-matter that each study could and should be so pursued as incidentally to cover adequate instruction in others. This solution of our programme difficulties also insisted on a subordination of the formal studies to the content studies. The school arts were no longer to be pursued as ends in themselves, but primarily as means to ends, as the instruments by which education is deepened and ultimately extended, but not as embodying an education themselves.

So promising and important did the solution of our programme difficulties by means of correlation seem that when, in 1893, the department of Superintendence of the National Educational Association appointed a Committee of Fifteen on Elementary School Studies, it was understood that one of the Committee’s most important duties should be to set forth, clearly and in detail, to what extent the problem of our programme difficulties could be solved by correlation. The Sub-committee on Correlation of the Committee of Fifteen did not solve this problem, however, nor did they attempt it, although they did something of as great or greater importance,

*Abstract of an article published in *The Forum*.

as I shall point out later on; and to this day we are without the guidance that a thoroughgoing study of the interrelations of the elementary school studies would afford.

By this time we had, however, attempted "enrichment," "elimination," and "correlation." This had effected a more or less thoroughgoing revision of the programme of elementary studies from beginning to end; and the result was chaos. There is no better term to describe the infinite variety, complexity, and instability that resulted from the successive tinkering to which the elementary school programmes had been subjected. And chaotic they remain. But it is no longer a discouraging confusion. Before this stage had been reached we had gradually come to see that what we needed was guiding principles. Without them it was clear that we should only make confusion worse by further changes.

Out of this demand for guiding principles arose the Committee of Fifteen on Elementary School Studies, the duties of which, it soon appeared, must transcend even the principles that underlie programme making. To make our educational endeavor effective, good teaching and wise organization and administration are needed, as well as good programmes of study based on sound educational doctrine. Hence the Committee of Fifteen divided its work into three sections covering, respectively, educational doctrine, the training of teachers, and the organization and administration of school systems.

Before the elementary school programmes had been transformed to any considerable extent, and while they were still substantially what they had been since the beginning of the nineteenth century, strong dissatisfaction had been felt with the narrow training furnished by our secondary schools. Although designed to meet the needs of all who could prolong their school education beyond the elementary school stage, our secondary school programme was determined chiefly by the small fraction of this number who could go beyond the secondary school to the college. The narrow and formal character of such a

secondary education was gradually perceived to be, like the elementary education that had preceded it, chiefly preparation for education, not education itself. The elementary school deferred the pupil's real education to the secondary school, the secondary school deferred it, once more, to the college.

Consequently, we began to transform the secondary school programme as well as the elementary school programme—by enrichment. The enrichment consisted of natural science, modern languages, English language and literature; history, government, "commercial training," and of late, economics; manual training, and increased attention to music and drawing. All this was gradual, but none the less real. As it proceeded it became evident that no one pupil could do serious work in the modern subjects and at the same time pursue his classics as of old. Twenty-five years ago we already had a bifurcation of the programme into classical and non-classical divisions of "courses of study," dating from 1821, when the Boston "English High School" was established for those boys who were not going to college; and this bifurcation gradually developed into a division of the programme into several parallel groups or courses of study, each group or course consisting of a combination of studies comprising both, or one, or neither of the classical languages. To obtain the diploma of the school, a pupil must select his group or course of study and adhere to it throughout the usual four years of secondary school work. The prestige of the traditional classical studies was, however, so great that the non-classical divisions were for a time inferior to the others, and on this account they were avoided by the socially and intellectually ambitious pupils. The inferiority of non-classical studies has rapidly diminished, however, because of a more just appreciation of the intrinsic value of those studies and a great improvement in the method of teaching them, and particularly because of a growing recognition of them by the colleges for college admission purposes.

We had now transformed our secondary school programme by enrichment and by a multiplication of courses of

study; and these changes had led gradually and naturally to the elective system. The result was, however, far from satisfactory; first, because the courses consisting of the modern studies were in dignity and seriousness of pursuit too often inferior to the classical course; and second, because these courses could not be brought up to the standard of excellence of the classical course until the conventional estimate of the efficiency of a school by the community should be based on its general excellence, and not chiefly on its success in preparing pupils for college through the classical course. That is to say, our programme changes had grown out of the demand for a good secondary education for every pupil, whether he went on to college or not; a natural corollary to this demand was that just as good work should be done in non-classical as in classical courses of study. But this demand remained unsatisfied.

Out of this demand arose the report of the Committee of Ten of the National Educational Association. It was to tell us how to combine a good modern with a good classical education; to tell us what a good non-classical secondary education is; and, finally, to promote uniformity among college-admission requirements throughout the country. And this it attempted to do. The attempt was made to give expression to a body of educational authority on the scope of each of the principal studies recognized as appropriate to secondary education; on the time that should be devoted to each of them; and on the best methods of teaching them—all this whether a given study was to be used for college admission purposes or not.

The Committee of Ten did not, however, define what a good modern secondary education is, except as that definition was implied in the programmes recommended by them. The report was lacking in an illuminating, well-defended educational doctrine; it was rich in educational authority. It did, however, state two principles of procedure so clearly and emphatically that they could not be missed or misunderstood, namely: (1) that most of the studies theretofore regarded as secondary school studies should be begun by pupils before the

secondary school age was reached; and (2) that a study should receive precisely the same treatment for pupils who are not going to college as for those who are. These two principles were intended to assist in overcoming two important difficulties in programme making that the rapid changes in both elementary and secondary school programmes had developed, namely, the articulation of elementary to secondary education, and the articulation of the secondary school to the college, respectively.

The enunciation of the first of these principles did much to promote desirable programme changes in pre-high-school grades, although it found rather scant recognition in the report of the Committee of Fifteen, which, as everybody knows, was prepared after the report of the Committee of Ten. The second principle has also found general acceptance throughout the country. It has promoted that widespread consciousness of their function as independent educational institutions which the secondary schools now possess and maintain, it has been emphasized in another important report of the National Educational Association—the report of the Committee on College Entrance Requirements; and, finally, its influence has been felt by the colleges themselves, which now manifest a steadily growing inclination to accept the proposition that any good secondary education, either with or without the classics, is a good preparation for college.

This last point, the present attitude of the colleges, received special treatment in the latest of the three reports on school studies, emanating from the National Educational Association—the report of the Committee on College Entrance Requirements just referred to. The demand for guidance in our educational endeavor had now reached the point at which it was felt that a general improvement in secondary education would result if we could establish *national norms or units of work* for each study, each of which, no matter what the study, might be accepted by any college toward satisfying its admission requirements. The attempt to formulate these norms was made by the Committee on College Entrance Requirements. It

is too soon as yet to estimate the specific influence of this report on school and college work; but it was another comprehensive and decidedly creditable attempt to bring order out of chaos, this time especially in the articulation of secondary to collegiate education. Incidentally, in no uncertain way, it tended also to overthrow shams and superficial work by setting up a reasonable standard of achievement by the recognition of certain units of work in all secondary schools throughout the country.

Now it is clear that all this while, amid the chaos of experimentation and imitation in school programmes, what we have been seeking is guidance. Out of this demand for guidance have arisen, as I have already said, the three reports referred to. Out of the same demand has arisen in this country, during the last ten years, a volume of educational literature in periodicals, books, and special reports by individuals and associations, the like of which for quality and quantity we have never seen before.

This brings me to the question with which I set out at the commencement of this paper. Why is it that in spite of all this unparalleled and unceasing educational interest and activity, this earnest search for guidance, and these perpetual experiments, we still seem to feel today the same vagueness and indecision about our aims and means, and the same uncertainty about our results, that we felt when the educational revival began some twenty years ago? I think the answer is found in a single sentence. We have not yet organized our educational doctrine, we have only formulated it piecemeal; and we have not organized our educational experience—we have not gathered the fruits of experience as we have gone along.

Each of the documents to which reference has been made, for example, is an isolated piece of work, without any reference to the others, certainly without any correlation with them. Each of them was formulated as if there were no other educational literature deserving recognition for work done in its own field, or to which its own peculiar subject-matter sustained important relations. A similar statement applies, almost to the same

extent, to the writers of the great body of the educational literature referred to. Each writer seems to regard himself as having received a special revelation of the educational gospel vouchsafed to him alone; so completely do most of them ignore their fellow-prophets, who, of course, reciprocate by similar apparent indifference.

I have already said that the significance of the work of the Sub-committee on Correlation of the Committee of Fifteen lies in the fact that they—or, rather, he—declined to bring order out of chaos by a more or less mechanical readjustment to each other of the conventionally accepted studies of the elementary school programme. Dr. W. T. Harris set himself the task of setting forth an educational doctrine, the task of formulating the principles underlying our educational endeavor. He therefore pushed the study of correlation beyond a mere inquiry into the relief of congested programmes by means of a readjustment of the various branches of study to each other, to a more fundamental inquiry, namely, what is the educational significance of each study—what contribution ought each study to make to the education of a modern child? What is the educational value of each study in correlating the individual to the civilization of his time?

That this was the problem of problems was clear to most persons as soon as it had been pointed out, and after the disappointment over what the report did not do had subsided. If further proof is needed, it is furnished by the fact that today the progress we are making and the obstacles we encounter in planning our elementary school programmes all center in the problems of educational aims and educational values. When we, teachers and laymen, see clearly what an equipment for modern life means, how much of this equipment it is feasible and desirable to attempt in the elementary school, and what each branch of study contributes in knowledge and power to this equipment, we shall possess the key to the solution of our programme difficulties, whether they pertain to the distribution and interrelation of studies and time allotment, or to adaptation to local needs, equipment, or teaching force.

Dr. Harris' report was, and is, therefore, a great report. But it has a great weakness. It is the work of but one man—a strong man, but nevertheless one only. The report could therefore possess only the strength of that one man. It came with the accumulated momentum of years of educational leadership on the part of its author. Nevertheless, it was not, and could not be, generally accepted as a contemporary solution of the important problem with which it deals. It had paid too little heed to the earlier and contemporary discussion of the same problem by others. It did not adequately represent collective professional insight.

The earlier report, that of the Committee of Ten, and the later report, that of the Committee on College Entrance Requirements, did not possess this particular weakness. The report of the Committee of Ten presented an overwhelming array of educational authority, and had, in consequence, as already remarked, an important and widespread influence in promoting the improvement of secondary school programmes. The fundamental weakness of that report consists in the absence of a thoroughgoing formulation and exposition of contemporary educational doctrine to which all good secondary school programmes must conform.

Had the Committee on Correlation of Studies "correlated" its report with the work already done by the Committee of Ten, the result would have been a much more important and serviceable document than either had produced alone. Educational theory based on experience and reflection would then have criticised and illuminated educational authority based chiefly on experience; and out of the two might have been produced a body of educational principles the overwhelming weight of which in directing educational practice would no doubt be conspicuous everywhere, whatever variations in actual programmes local preference, local needs, or local idiosyncrasies might introduce.

In the report of the Committee on College Entrance Requirements we have again an important document that absolutely ignores the work of its predeces-

sors, and once more collects contemporary educational opinion *de novo*. The Committee on College Entrance Requirements had the advantage, however, of formulating its resolutions in the light of the opinion and experience that had followed the publication of the two earlier reports, although there was no explicit attempt to correlate the work of the committee with that of either the Committee of Ten or the Committee of Fifteen. Its most important contributions to guiding principles are its approval of electives in secondary school programmes, its recommendation of a unified six years' high-school course, its emphatic insistence that any study well taught during a sufficiently long period should be accepted toward satisfying college admission requirements, and its attempt to define national norms or units of work in the several studies of the secondary school programmes.

As already stated, I think the influence of the report of the Committee on College Entrance Requirements, like that of its predecessors, has been considerable. Besides the good it has accomplished, it has, however, like those other reports, also complicated the educational situation by not explicitly taking into the account what the earlier reports had already done, and by failing to incorporate explicitly in its resolutions and expositions the cumulative influence of the best educational literature that had developed since the agitation which led to the other two reports had commenced. Like the others, the report of the Committee on College Entrance Requirements is, therefore, an isolated document. Like them it must fail to exert, as it might have done, that unifying influence for guidance which we need so much, and which is still a consummation devoutly to be wished.

Incidentally, these three reports have failed in another way to become the unifying influence which they might and should have been. Each of them not only ignored the other two, but set itself the impossible task of solving programme difficulties by studying only a limited portion of the pupil's educational career. Once at work, however, each committee found it impossible to limit its

field so narrowly. The Committee on Correlation necessarily dealt, incidentally, with secondary school problems; and the other two committees similarly found it necessary to consider, to some extent at least, problems of elementary education.

Taking the three reports together, there is probably no single defect that has been so effective an obstacle to their use for guidance as this want of unification of their subject-matter in harmony with the interdependence of the problems with which they deal. We have had a body of educational doctrine that covered elementary education—the report of the Committee of Fifteen—and one that covered secondary education—the report of the Committee of Ten—as if the two were distinct and independent. We need an educational doctrine that covers the entire school period, and so may serve as a guide to practice at each stage of the pupil's school career.

We are, therefore, still seeking definite guidance. The want of it has led, and still leads, to economic and educational waste, and hence to uneasiness and vacillation within the teaching profession, and to dissatisfaction in the community.

The remedy for such obstacles to progress is not far to seek; but experience, thus far, seems to show that it is difficult to secure. It is this: We need a new formulation of contemporary educational doctrine that will serve to clarify our own conception of what a modern education means, and therefore serve as a guide to intelligent, co-operative, and prolonged experimentation on a large scale. Such a formulation of educational doctrine would be based on our present knowledge of social needs; and it would be formulated in the light of the best educational literature that the last dozen years or so have brought forth, to say nothing of the educational classics of earlier generations.

Such a body of educational doctrine would be more generally and more seriously studied than any formulation of educational doctrine has ever been studied; and it could, therefore, be expected to furnish an insight and a purpose into the now too generally imitative and chaotic experiments in programme-

making with which we are so familiar. Educational experiments are desirable and inevitable. My plea is for a more rational experimentation than we have yet had, and, as I shall point out in a moment, for an experimentation that enables us to gather the fruits of experience as we go along.

With such an educational doctrine thoroughly assimilated and consciously adhered to—no matter whether it achieves universal acceptance in all its details or not—superintendents, principals and teachers can face the community with a professional consciousness that must triumph over ignorant or meddling obstruction, repeatedly break down indifference, and occasionally promote enthusiastic co-operation, until it is clear just what can and cannot be achieved by it. By that time we would demand a fresh formulation of our educational doctrine. New experiments would follow, but not a repetition of former errors.

But a satisfactory educational doctrine is not enough to promote educational progress. To be really effective, doctrine must achieve conspicuous success in application over a wide area. Now, just as we have not organized and adequately assimilated a generally accepted educational doctrine, so we are without a body of recorded educational experience. Results actually achieved and collectively presented constitute a force that is capable of sweeping away superficial criticism or paralyzing scepticism on the one hand, and meddling interference and impatient clamoring for premature results on the other. Isolated successes have been advertised, to be sure, and failures, more or less obvious, have sometimes been frankly confessed, and sometimes unwisely suppressed. But in neither case have we had an orderly presentation of both successes and failures over a wide area. We have had plenty of experiments; indeed, as I have intimated, our whole educational activity for nearly a generation has consisted of experiments. But we have had little co-operation. Just as every educational theorizer has worked by himself without taking due account of the labors of his fellow-workers in the same field, so ev-

ery superintendent has pursued his way, apparently in blissful indifference to what his fellow-superintendents were doing, multiplying instances and varying conditions *ad libitum*.

No physicist or biologist would ignore his fellow-workers in this way. When Roentgen announced his discovery, other physicists confirmed his discovery. The facts of embryology and their bearing on the theory of evolution are similarly confirmed by each biologist under the conditions which led to their discovery. The principles of science once established in this way, no one can doubt or belittle them. So it must be in education, if we are ever to escape from the quagmire

of random and isolated experimenting in which each worker seeks to find the way out for himself, disregarding the landmarks and sign-posts that have already been set up by his predecessors. Briefly, then, we must organize our educational experience just as we must organize our educational doctrine, if we are to make real progress.

Under such circumstances we could face the teaching profession and the general public with facts, instead of opinions. The enormous difference between the weight of these two very different things in educational affairs still remains to be experienced.

THE TREND OF UNIVERSITY AND COLLEGE EDUCATION IN THE UNITED STATES.*

BY WILLIAM R. HARPER, D.D., LL.D.

President of the University of Chicago.

In every realm of action, men are to-day expecting important things to accompany the beginnings of this new century. If we expect these same great things in the field of education, we may not forget that, with enlargement and prosperity, there must come at times reaction, at other times readjustment.

I. The place occupied by libraries and laboratories in the educational work of to-day, as compared with that of the past, is one of commanding importance. Indeed, the library and the laboratory have already practically revolutionized the methods of higher education. In a really modern institution the chief building is the library, with the stacks for storage purposes, the reading-room, the offices of delivery, the rooms for seminar purposes; it is the center of the institutional activity. The librarian is one of the most learned members of the faculty; in many instances, certainly, the most influential. Lectures are given by him on

bibliography, and classes are organized for instruction in the use of books. The building is open day and night. It is, in fact, a laboratory; for here now the students, likewise the professors, who cannot purchase for themselves the books which they must have, spend the larger portion of their lives. A greater change from the old order can hardly be conceived. The student in the future will do little of his work in the study; he must be in the midst of books. Some of us will see the day when, in every division of study, there will be professors of bibliography and methodology, whose function it will be to teach men books and how to use them. The equipment of the library will not be finished until it shall have upon its staff men and women whose entire work shall be, not the care of books, not the cataloguing of books, but the giving of instruction concerning their use.

The laboratory is an institution altogether modern. To-day, it occupies the

*Abstract of an article published in the *North American Review*.

position of honor next to the library. It might even be said that the laboratory has outstripped the library. With but few exceptions, institutions have a single library; many of them have several laboratories. But even in the strongest institutions, these laboratories are not yet what they should be; for I remember that in a university which occupies to-day at least the second position among the universities of the South, the chemical laboratory is located in a portion of a basement; and in more than half of the colleges and universities of the country the work of all the departments of science is done in one building, or in a portion of one building. It will be necessary to provide distinct laboratories, though not in every case separate buildings, for each of the departments of natural science, physics, chemistry, zoology, geology, mineralogy, palæontology, anatomy, physiology, anthropology, and the rest. The building and equipment of a single one of these will cost more than the entire college plant of the last generation.

Progress up to the present time has been made largely in the laboratories of physics and chemistry, and in the observatories for astronomical work. Even here the present dwarfs the past. Only a few years ago, the eighteen-inch telescope was a monster. Now we have the thirty-six inch of the Lick, and the forty-inch of the Yerkes.

The libraries and the laboratories with their equipment might be said to constitute the outside of educational work. But that would be only partially true. When we realize that the method and spirit of the work are largely determined by these outside factors, we consent to allow them a place upon the inside. The absence of these determined in large measure the character of the work fifty years ago; their presence has transformed the whole work of education, and the work of transformation will continue.

II. The future will witness the lifting up of professional education and a closer identification of the professional schools with the universities. The great law-schools and medical schools of our country, as well as those of foreign countries, are not law-schools and medical schools

which stand alone, independent of university connection. They are rather those schools which share the high ideals of the university, and are under university management. The majority of law and medicine schools in this country are stock companies, organized for pecuniary profit; but within a short period a change has come, and we already see the beginnings of reorganization in every quarter. The great theological seminaries of the future will be those which are identified, directly or indirectly, with the universities. The ordinary theological seminary cannot to-day provide the curriculum of study demanded by those who are to do the work of the ministry during the next quarter of a century. The churches demand a ministry of wider sympathies and larger views. The tendency of most theological education has been to make men narrow, rather than to broaden them. The churches already recognize this fact, and not only the churches, but the students themselves; and to-day it is not an uncommon thing for college men to omit entirely their theological training, in order to avoid what, they fear, will injure rather than help them.

This union of professional education with the university, which is rapidly taking place in all the great centers of the country, means two things: (1) the uplifting of this work, its broadening, and its acceptance of higher ideals; (2) the separation, to a greater or less degree, of the control of this work from the particular professions. The medical profession cannot control the medical education which is given in connection with the university. The ideals of the university are higher than those of the profession at large, and in spite of the strength of the profession, the schools thus connected will pass out from under their jurisdiction. The same is true of the law-school and its relation to the legal fraternity. The same is true of the theological school and its relation to the church.

III. The future will bring a sharper distinction than has ever yet existed between the higher education maintained by the state and the higher education conducted on private foundations. In

this latter class—which may be called, for the sake of definiteness, non-state education—the contribution, direct or indirect, of the various denominations forms the larger part. It cannot be said that the best interests of education at large would be secured if the state, as such, were to abandon its present policy of maintaining and directing the higher educational work. It would be just as great a mistake if, on the other hand, the non-state institutions were to disappear. Each of these great divisions possesses sources of strength to which the other may not lay claim. Both have been thoroughly established; both will develop side by side through and beyond the twentieth century; each will correct the weaker tendencies of the other; each will supply something which the other cannot furnish. The one will to some extent antagonize the other, but it may safely be predicted that both, in generous rivalry, will go forward to do a work which neither could have done without the other. The state institution is one agent of the body politic; the non-state institution is the other.

IV. At no distant day, there will come into existence a class of institutions of higher learning, the slight beginnings of which have already appeared. So long as no university existed, in the strict meaning of the word, all institutions of higher learning belonged to the same class; nor was the line drawn between these institutions and institutions of a lower class, known as academies and preparatory schools. There are many academies in the United States which bear the name of college, and not a few the name of university. But since in these last years institutions having the real character of universities have been established, it is inevitable that these in time will differentiate themselves from the college, and that the college will in time differentiate itself from the academy. An organization was effected two years ago, composed of fourteen institutions which are recognized at home and abroad as institutions doing work of a university character. This was the first step in a series of steps, which, within a quarter of a century, will bring about the classification just mentioned; a clas-

sification greatly concerning the denominations, as such, and the denominational colleges; a classification, however, the real result of which will be higher standards of work, better distribution of facilities, and more honest realization, on the one hand, of promises made by institutions, and, on the other, of hopes entertained by students.

Directly along this line will come another change, namely, the development of high schools into "junior" colleges. Evidence that this change is already taking place may be found on every hand. The establishment of hundreds of high schools through all the States is in itself a new element in our educational machinery, which has disarranged the former system, but, at the same time, has greatly advanced the interests of education itself.

The suggestion is made, from time to time, that the people will not consent to continue the public support of these high schools. But, as a matter of fact, they do continue to support them; and, more than that, these schools are constantly increasing their requirements for admission, as well as their facilities for instruction and the length of the curriculum. It has now come to be generally recognized that the ideal high school must have a curriculum of four years, and in many sections of the country this has already been secured. In others, it is coming. The next step in the development of this work will be the addition of one or two years to the present courses; or, in other words, the carrying of the high school up to the end of the sophomore college year.

With this modification of the high school, and with the reduction of many of our colleges to institutions of the same grade, there would come to be a system of colleges, state or non-state, which would meet the demands of the situation as they are not met to-day. Many of the normal schools of Western States already practically occupy this position.

V. The small college, the college of the denomination, is certain to continue in the future; but it will sooner or later yield to the pressure of competition on every side and in every line, to the demands of economy, made more rigorous

by the diminishing rate of interest, to the urgency for a higher standard of work, and to the claims made by its students for greater facilities in the way of libraries and laboratories, and join itself in close association with other similar colleges. The purpose of this association will be, in part, protection, but also, in part, greater strength. With such association, and as a result of the understanding reached thereby:

(1) There will come a better distribution of work among the colleges, and all will not undertake to do every kind of work;

(2) There will come protection for all who thus associate together against misunderstandings and ignorance;

(3) Results will be secured which no institution working alone could possibly hope to secure;

(4) Educational work will be lifted above the petty jealousies and rivalries that to-day bring reproach upon it;

(5) The evils of competition will be mitigated, and for these evils there will be substituted the blessings which follow honorable and legitimate rivalry;

(6) The work of the small college will thus be dignified, and its place will be assured by the side of the institution maintained by the state;

(7) Such a relationship will be, in fact, a federation, and through this federation each of the interested colleges will be enabled to strengthen its faculties; for there is no reason why a strong specialist in a particular subject might not serve two or three institutions, to the advantage of the subject represented, the colleges thus associated, and the cause of higher learning.

Moreover, one may predict the close association of the smaller colleges, not only with each other, but also, in every case, with a university. The great advantages which will be found to accrue both to the college and to the university in such association will bring this about; for, after all, institutions, like individuals, move along the line of least resistance. One cannot point out these advantages in detail, but among them will be included:

(1) The intermingling of the teachers and lectures, those of the college doing work in the university, and those of the university doing work in the college; the interchange of blood, as it were;

(2) The recognition of university appointment, thus bestowed directly and indirectly upon the teacher of the college;

(3) The opportunities for special investigation at the university afforded the younger college instructors;

(4) The special assistance of many kinds which the university may render the college in the conduct of its work;

(5) The prestige, secured to the degrees of the college, in view of re-enactment by the university;

(6) The loan of books and apparatus to the college by the university;

(7) The establishment of scholarships and fellowships in the university, open to students of the college;

(8) The assistance rendered in the selection of instructors;

(9) The financial confidence created, upon the basis of which larger endowments may be secured;

(10) And, in general, that help which a stronger agent may furnish one not so strong in the accomplishment of the latter's work.

This association of denominational colleges with a university will take on different forms. In one case, the colleges of a denomination will be thus associated with a university known to be in sympathy with them and their work, even though the college and the university are situated far apart. In another case, the colleges of a section, regardless of denominational connection will be thus associated with the university of that district. Again, it will be the association of the colleges of a State with the State university. In some cases, this association will be effected on the part of the college with more than a single university, perhaps a state and also a non-state institution. Each of these kinds of association between college and university exists to-day; and the advantage of such associa-

tion, when appreciated, will be sought by many institutions.

The field of higher education is, at the present time, in an exceedingly disorganized condition. But the forces are already in existence, through the operation of which, at no distant date, order

will be secured, and a great system established, which may be designated "the American system." The important steps to be taken in working out such a system are co-ordination, specialization, and association.

METHOD IN SCIENCE TEACHING.*

BY LOUIS MURBACH,

Department of Biology, Detroit Central High School.

A man's power depends on three things—his native ability, his environment and his education. It is only the latter that can enter into a discussion on method.

Much has been said about what education is, but of all its alleged components I regard two as adequate—informing and training. Education begins with the first of these almost solely, being later supplemented by the second. The child's earliest acquirements are impressions, and these become information stored in the mind, to be followed by the discipline of later school years and experience in life. This, too, has been the natural method in the growth of education.

The humanities being the earliest knowledge possessed by man, naturally formed the first material for an education and were simply acquired and handed down, exercising chiefly the memory and requiring little effort except attention on the part of the recipient. There was little exercise of thought, little comparison, judgment or conclusion. Even the faculties of attention and retention were pampered by repetition, this feature giving rise to the Jesuit maxim, "*Repetitio est mater studiorum.*"

When progress enough had been made in science to win for it recognition as one of the elements of an education, it was imparted by the method employed in the teaching of the humanities, and there

was no distinctive method in science teaching. The deductive sciences, philosophy and mathematics, were the earliest taught and continued to employ largely the same method for a long time after experimental or inductive science became independent enough to break away and use its own method.

A part of the real value of the laboratory method—observation at first hand—is gaining knowledge by experimentation, and this is the practical application of the syllogism of philosophy which has been the classical method of mind training. The laboratory method has given us this most efficient way of learning facts of science, making them a part of our knowledge instead of parroted wisdom. But experiments teach not only facts and principles; they also train, and give power to find new data and laws, and so contribute to human knowledge.

Not only the mind but the avenues of the mind must be trained. Manipulation, observation, reflection, comparison, judgment, all must be exercised. Because the student *himself made the experiments and observations* in specially fitted rooms, called laboratories, instead of *being told about them* in lecture halls, this method of natural science study came to be called the laboratory method. Its first introduction into schools was in connection with biology, and in England Huxley and

*Condensed from a paper read before the Detroit Principals' Association, April, 1901.

in this country the elder Agassiz were its champions, to whom it owes much.

Theoretically this method is the re-investigation of causes, facts, principles or laws that underlie natural phenomena, but re-investigated under instruction and guidance, the most favorable circumstances that can be imagined. So the process is a stimulating one, if the material is adapted to the age of the student in such a way that his powers are constantly exercised but not overtaxed. For early education it has the advantage of proceeding from the concrete to the abstract, from the simple to the complex, from the known to the unknown, following the order of the developing mind.

Practically it has been much abused by instructions and directions given in such a way that the student becomes a mere verifier—an intellectual drone—asking “What is to be seen?” and “What conclusion is to be drawn?” instead of being encouraged to a much needed independence. There are at present several idealists: Those who tell nothing; those who direct the student in such a way that he can independently find the important data; those who tell all. The last are usually the old school scientists who hold, for instance, that the student must first learn the laws of gravitation before he experiments with falling bodies. They object that there is not time for rediscovering principles or laws that scientists have spent a long time in understanding. But we answer that the man who discovers something, in order to do so must have had more power than his fellows, and he has developed this power along his line of discovery by slow increments. May not the student, by this very method, gain a power which will carry him far in advance of the point he would have reached by the old didactic method of science work? It is not so hard nowadays to get an affirmative answer, since it is generally conceded that even in secondary schools discipline is more important than the amount of knowledge stored. The latter may be forgotten or misapplied, but the former gives power to reproduce forgotten facts or to find new ones. But before giving power, laboratory work begets a habit of

thoughtful and accurate observation, careful consideration of all phenomena or facts—a most important preliminary step in all education.

Now, while it was said no more time need be given for finding facts and rediscovering principles than required for another lesson, this means a lesson of equal value. It is important in the laboratory method to give time enough for each experiment to understand fully the factors included, separating those not touching upon the question from those involved in its decision. The next step in the process is the comparison of facts observed, or the results of an experiment with those of another experiment or with some experience. All this is necessary before the final step, the drawing of the conclusion. Here we see a striking difference between this and the informational method. In the latter nothing further is required than to receive and apply (?) that which is received. And when students in our schools learn to acquire things by the laboratory method they are doing what advanced scholars used to do, and in so far our present system is ahead of the old. Is it surprising that students have to be urged to compare related facts and draw conclusions when it is adult nature to follow prejudice rather than facts and their consequences?

Going a little more into detail of the method in natural science teaching, we may say it is the easiest one to follow. In the first place, it is the observation and comparison of the evident phenomena in nature, and this is akin to analysis. Thus to learn the use of fleshy fruits these are examined, and it is observed that all fleshy fruits have some food material, bright colors and agreeable odors and flavors, which can be of no direct use to the seeds they contain. These have nearly the opposite qualities. Now, when it is asked what will happen if an animal, attracted by these inducements, carries away and eats the fruit, the inference (synthesis) that the seeds because of their qualities are rejected and thus scattered leads to the larger truth that fleshy fruits are solely for the distribution of seeds. This general method of observa-

tion of things themselves, comparison and inference, has been found so valuable that it is no longer employed in science alone, but also in other studies, being used to some extent even in language teaching. While the observational method in general has been applied to other studies, the experimental method can be used in science alone.

Since not all of nature's processes are open for inspection of cause and result, a large number of phenomena must be determined by what is known as the method of experiment—that is, by modifying the natural conditions in such a way as to get definite or special results, and from these artificial conditions to obtain facts or data from which the natural processes can be inferred. As the experiment is so important both in science and in science teaching, and has been so much perverted, it may be well to go more into detail on this part of the subject.

Someone has said, "An experiment is a question put to nature." Another view is that an experiment modifies the conditions of nature in such a way as to show what are the natural phenomena. This seems to me more comprehensive.

I believe it is the consensus of opinion that an experiment is a test or trial to find out something, and since it is to reach some conclusion it is in the nature of a syllogism and must embody two premises. If this is true, a moment's reflection will show that a great many so-called experiments in our textbooks are merely illustrative or confirmatory. This is always the case where the proposition is stated first, or where the object of the experiment foretells the conclusion. Such experiments might as well add the "*quod erat demonstrandum*" of our geometries.

In order to determine any point by an experiment we must have two sets of facts, one of which may be the conclusion of a previously performed experiment. Thus if the learner is to test unknown substances for starch he must apply iodine, not only to the substance, but also to some known starch. In the student's training it is very important that this step be taken; simple though it seems, it is fundamental for inculcating accuracy. After the experiment has been

observed a sufficient length of time we have two distinct results, and by an act of comparison and judgment from these two the thing to be found out, or conclusion, is drawn. Accordingly, the chief points of an experiment are conditions, results and conclusion.

It is the experience of nearly every teacher that the pupil remembers the apparatus better than he does the essentials of an experiment, better, even, than the conclusion. Having learned by experience that the apparatus impresses itself on the pupil's mind to the detriment of the real principle, the teacher would better have him describe only the conditions as brought about by the apparatus, operation or any modification of natural conditions. This has another advantage; it does away with the necessity of describing the object of the experiment, in which operation, very frequently, the conclusion is too nearly hinted at, and the pupil becomes a verifier instead of an independent observer.

Another great difficulty is in getting the student to see clearly the difference between the results of the modified conditions and the conclusion that can be drawn from such results. He often states the conclusion and gives it as a reason for the result, or he cannot get any conclusion at all. Frequently this is because the experiment takes into account experiences that the student has not had. On the whole, it is a lack of perception of the relation between cause and effect and is a part of the student's training that needs serious attention.

All this can be remedied by patient questioning, shifting premises, etc., but a better way, I believe, is to give some simple experiments leading up to the one in question, or, it may be, several different experiments leading to some of the most important principles to be fixed. There is another value in giving more than one experiment, and that is more perfectly clinching the fact of principle taught, to say nothing of the discipline. It will lessen the tendency of placing the apparatus in the foreground, since the final result is obtained with different apparatus. It will also do away with the temptation to make experiments easy by

prefacing them with "to show so and so," in which case most students, even when the experiment fails, will draw the prefixed conclusion. This is pernicious, as it changes the experiment into a mere illustration, warps by its insinuation the pupil's too plastic judgment, and lessens his independence.

The making of several experiments for one conclusion also recognizes the time element in education. To grasp any idea well the young mind especially must have time in proportion to the difficulty of the idea, but the time is not profitably put in if the idea is beyond the experience of the pupil. Here again there is danger than the pupil will be carried along by the teacher instead of being allowed to pick his own way. To do this independently a few simpler experiments can be given as preliminaries, leading up to the principal one. To illustrate: A test for oil in seeds should be preceded by an experiment on a seed known to contain oil; the experiment for starch-making in leaves should be preceded by the test for starch, then by an experiment for starch in a normal leaf, then by one on an etiolated leaf.

Naturally the lack of school time for this method will be the overwhelming objection urged by all. But since this kind of training and the knowledge gained is so fundamental, the old adage of "a stitch in time" was never truer than the assertion that right here the pupil's whole intellectual future is at stake. He would better take time at first to save it at the last.

The application of the science method in the primary schools might begin with nature study in the grades, and for this it would be best if we did not study any special science, but some part of nature as a whole. It would be most profitable if the study were largely observational, few inferences being drawn until many data are at hand. The observations may

be along the line of experiences rather than experiments, at first; thus, instead of making experiments, as is done in the high school, for determining the conditions necessary for the germination of seeds, let the pupil simply place seeds in favorable conditions and watch them germinate and grow, thus realizing that they are alive and can do something.

External general observations as to form and parts are simple and easily made and may lead to simple inferences.

In the higher grades general relationships and some classification of phenomena would give a bird's-eye view and prepare for the studies following.

Some of the easier parts of the physical geography might be taught in the eighth grade. This should be followed by the more difficult parts in the same study in the ninth grade, by botany, zoology and physiology in the tenth grade, by two courses of chemistry in the eleventh grade, and two courses of physics in the twelfth.

It is not an infrequent complaint that the work in science does not show for as much as that in the languages or mathematics. Is this to be wondered at when the pupil begins the latter studies with his entrance into school and continues them through his whole course, while he may have anywhere from but one to three terms in science? And his science teacher frequently has this as an adjunct to several other studies. How can such a teacher be expected to practice any particular method or make any strong impression on his pupils?

To give natural science studies and their method of educating a fair chance would mean consecutive and logical arrangement of things studied from the first grade up, continuousness or sequence to be followed out through the whole school course, even if only a small amount of time be given daily.—*School Science*.

MANUAL TRAINING AS A SOCIALIZING FACTOR.

By SUPT. RICHARD G. BOONE,

Cincinnati, Ohio.

To habituate one to co-operate with one's fellows is a means of socialization. To co-operate with one's fellows means not only working in concert with them, but working with their interests in mind. It means that one thinks, in his doing, not of his own interests only, but of others and their rights, their wishes, their plans, their conditions, their resources, their limitations, their achievements, their failures; and the disposition to modify one's work in terms of this view of them and theirs. One becomes thereby a factor in the common life; not an individual only, but a person; not a finely finished whole in himself only, but a forceful part of the larger whole of society. One becomes a member of the community, sharing efforts toward a common good, and sharing the returns of this combined effort; sharing privileges and resources, but sharing also responsibilities and obligations. One is socialized as he becomes a factor in the common life, contributing of his richest individual possessions to the common store of skill, insight, culture and care for the public welfare.

To transfer one's interest from self to somewhat other than self is a socializing process. This is the centrifugal movement that finds its fruit in the outgoing, not the incoming product. To have devoted one's life to the amelioration of mean social conditions, to have instructed or guided the ignorant or wayward through interest in them, not for self-preference, to have exercised one's skill, not for profit alone, but in lines where there was a public need, to have re-distributed Nature's forces to the end that human nature is humanized; is to have become socialized.

As one must live chiefly among and in conjunction with others—this acquirement of the social reference is an essen-

tial part of every one's education. It is not enough that one know much and know it thoroughly; he must know what the world has need of. Each one is, in a measure, the community's trustee; a steward of an estate, whose income many others share with him. The school must give him both the tools and the disposition to administer the estate to their and his common profit. One is born an individual, and is, by nature, careful of his own, acquisitive, and more or less contentious; through taking others into account in one's daily behavior, doing what the larger neighborhood or group interests suggest, even against one's individual preference; and refraining, in view of the common welfare, from what one wishes for himself, one becomes a person. And this habit, the education of the youth should confirm. These words are not used at all with the missionary spirit in mind or the mandates of religion or the conscience; but solely, upon this occasion, with the thought that as we must live in social groups and in community relations, one has need, on the purely secular and business levels, to be educated for efficient service and efficient sharing in these relations.

The public school is in itself a great socializing factor; a large school better than a small one; a school better than the home. Here as elsewhere one must live what one has thought, else the thinking loses its vitality. To live among people, in general, fits one for living among people. The class's influence is more effective than the didactics of the teacher. The school educates by virtue of its being a school. The home governs may be scholarly, clean, refined and possessed of great personal force, but is, by the nature of the conditions, handicapped in the effort to fit the one

child or the one family of children for intercourse with the complex relations of an involved social business and institutional life outside the family. The class room, the playground, the concert of action and interest, the give and take of conflicting biases, and the inevitable manifoldness of view, make the public school—dangerous as it may become, because of its too frequent democratic license—the most efficient institution known as a means of socializing the child; translating his narrow selfishness into the terms of ethical standards.

Further and more specifically, the school that involves mutual adjustments is more efficient in this humanizing process than the best of schools that require individual knowing only or regard individual interests narrowly. The possession of mere knowledge, however comprehensive and accurate, does not of itself and necessarily confer social efficiency. Indeed, men of affairs, are often persons of less learning, but of much resourcefulness and human adaptability. The traditional school too generally lacks this training in purposed mutual adjustment of individual behavior to the social environing conditions. Talks to and with the young about patriotism and the flag, about charity and conspicuous instances of beautiful philanthropy, and heroisms in war, sacrifices in poverty, the attractiveness of refinement, the utilities of fair dealing and honesty—generally end in mere talk. That they shall show any results in their own lives of real love for their home institutions and the national banner, a disposition to be charitable where there is want, fitness for heroisms in times of public danger, a readiness for such economies and sacrifices as shall transform poverty into a provident surplus, the winning gentleness of refinement, and faith in the future returns of integrity and industry; the young must have had opportunity to make habit of expressing their faith in the flag and their country, of being charitable to the want that lies nearest them among companions and neighbors, of serving others rather than themselves in times of danger and distress, of sacrifices and provident savings well within their resources, of strict hon-

esty with themselves and others when there is chance for dishonesty and pretense.

The reader will agree with me I am sure that the school whose lessons in the acquiring of knowledge are supplemented by opportunities for the adjustment of their behavior, daily, to the social interests which they share in their school, is a more effective discipline for an intelligent participation as adults in the institutional and neighborhood life of their time than any school, however well administered, that looks to individual improvement and personal culturing in the narrow sense. It takes the attention and interest of one from himself and his concerns, and is correspondingly regenerative of motive and character.

There is hence an enormous appreciation of work as a means of education—when the end of work is a product of common use or other's use. Adults may live and sacrifice and suffer for others—with purpose, and intelligently; children rarely do so. But to have made something, however simple, for a companion or a parent or for an exhibit and inspection, or for the market—best of all, for a companion or for the class of his fellows, has far-reaching consequences for good in a child's life and fixes the social habit. His interests are projected into a larger field, whether it be the domain of thing or person. The object of his living is outside himself and life is by so much dignified. The man who can do things is rarely pessimistic or disheartened. The future holds promises and misanthropy is a whim.

Contemporary pedagogy is growingly appreciative of the wholesomeness of work as a school means of fitting for life—whatever sets the child to work of his own motion; work with an interest; work with hand and eye and mind; work with his own purpose in view; work that fits means to ends. But it must be work that is something other than copying and mere imitation. There must be an intelligent vision behind the work, of something which he wants to do. The exercise must be one that gives fair promise of valid results of his own planning. If the product be one that he or others can use, and for which there is a need, and

that is made of service after its production, so much the better. The value of the exercise consists in the reactions of the promised outcome upon the effort. The child is manufacturing or doing—playing or working for a purpose.

Whence comes the great value of the kindergartens—whose exercises are directed (in part) to cultivating a habit of working (or playing) with others, working for others, deferring, in all common matters, to others, regarding the interests of others. The kindergarten is honored, not for the information acquired (though this is considerable and genetic), but for the wholesome attitudes of mind, the altruistic biases, the self-initiative, the alertness and openminded interest, the self-reliance, the power of varied expression—drawing, folding, building, modeling, cutting, mimicking, marching, posing, planning, etc.

In the kindergarten the child learns resourcefulness; becomes concessive; works in concert, without losing his initiative, finds concrete realization in his own efforts of the struggles and achievements of the race. He makes things, and lives over in his daily behavior the conduct of others, puts himself in the place of his companions, surrenders his caprice to the good or wish of the group—takes his first formal lessons in real democracy. The kindergarten is a great socializing and humanizing actor among all purposeful educational agencies. Herein also lies the sufficient reason for manual training, learning through making things—things that are an incident to the community life.

What has been said in the preceding paragraphs has been introduced not for their sake alone, but to present the various meanings of the socializing process as a basis for interpreting manual training as one of the available instruments in the social equipment of the child. This paragraph, therefore, can well be brief, if the introductory statements have been rightly made. The whole problem of industry is a problem of social science. The wise Hebrew dictum dating from the closing of the Eden incident, "In the sweat of thy face shalt thou eat bread," has, in the strenuous modern social conditions, come to be, "In the toil of thy

life shalt thou win a place among thy fellows," and so be entitled to eat. Whatever education in any profitable degree fits the individual to join helpfully and certainly with his fellow-outcasts from Eden (which means incasts of the world) in the economic struggle, so that he may still retain or augment his own self-respect, is an education that is deserving of our respect.

Without in any sense, or to any extent, depreciating by a word my confidence or the reader's, in the saving influences of the traditional courses in literary and scholastic studies, my conviction is strong that for a great majority of the country's, and especially the city's youth, the first and most effective lessons in self-helpfulness, which means public usefulness, are to be found in the thoughtful work of the hands. Possibly this is the real significance of the Mosaic account, that as "man shall not live by bread alone," but by every word of the divine commission that endows him with human (hence divine) responsibilities; "so by the sweat of thy face, shalt thou learn how honorably and modestly to use thy bread in the face of these responsibilities." Certainly the chief obligations to labor, under which we moderns exist, lie outside ourselves—in the needs of our families, who are ourselves projected into the home, the needs of our neighbors (of Good Samaritan kin), and the conventional order that is the creation of modern conditions. The child must not be taught that he does, but so taught that he will sustain this helpful relation to his generation; contributing his part toward conserving and furthering safe economic and industrial relations with his fellows; adding skill to his intelligence, and making intelligent his skill; able and disposed, cheerfully and habitually, to put his entire endowment of learning, refinement, chastened purposes and love for the good, the pure and clean, his high living and heart-whole interest in his fellows, into whatever lowly or exalted labor of his, behind the counter, on the farm, at the desk, in the shop or at the machine, before the bar, or at the bedside, in the pulpit and upon every separate task; that he hold not his place among men by sufferance only.

Whether it be that skill is added to intelligence, or intelligence is gained through training for skill, the exercises that lead to skill are invaluable. Four out of five of the youth of our land receive now too little education in the schools to furnish any adequate foundation for expert work. Is it not possible that education through manual tasks may furnish the coveted solution of the problem; that boys and girls who are to be constituent members of an autonomous society shall be equipped to do something—every one his own separate service—something that he can do well, and that society, for its welfare, needs to have done?

In the manual training school it is not meant that each shall be made ready for some one trade or other employment; but that each, through working at typical trades, employing common princi-

ples, shall be made resourceful in the use of mechanical forms, tools and machines, to the end that the manufacturing and designing habit shall be fixed. In this sense the manual training school has great responsibilities. Our people are a great manufacturing and commercial nation. And along with as good a general education as they can be brought to use or accept there should be provided this means also of equipping the indigent or indigent classes for more skilfully, effectively and contentedly doing whatever work their station in life and the economic conditions impose upon them. Not for their own sakes alone, or for the profits of thrift therefore, but as a means of social amelioration and public safety, some such provision should be made for technical, hand or industrial training in every system.—*Education.*

ENGLISH COMPOSITION.

By SUPT. J. M. GREENWOOD,

Kansas City, Mo.

Some things are accomplished by accident, but the habit of easy, rapid and accurate writing or speaking the English language is not one of them. It is a self-evident fact that wide differences exist among individuals as to the natural ability to acquire and to use the art of written or vocal expression, just as there are variations in the power to acquire other kinds of knowledge. So far as instruction in this department of education is concerned, perhaps the unsatisfactory results may be ascribed, in a large measure, to the indefinite aims that the majority of teachers have in mind, in conducting pupils forward in this line of work. The usual method of procedure has been that of absorption of contamination, by words, phrases and sentences. That is to say, certain authors are read, analyzed and reduced to the saturation point so that unconsciously the learner's mind is filled with their effluvia. It is in-

ferred that the learner will live and breathe this literary atmosphere till it permeates all his word, sentence and paragraph brain-cells, and all that he has to do when he needs to use this pent-up energy is to turn the composition tap and let it flow out through cold ink on white paper—or to toss it out into the air to vibrate as a shiver around the world. Close reflection will convince anyone that this theory of making a style is largely nonsensical, and the chief effort of a writer trained under such a system of tuition will be put forth to counterfeit his natural style in order to avoid detection. I would not be understood as condemning the advantages that come to one from studying the classic authors of ancient and modern times, or of preferring some authors to others, because such studies are invaluable as revealing the structure and logical development of the human mind when working under the highest

degree of intellectual inspiration, but what I contend for is that the imitative standard is not the highest, nor indeed is it the best for the learner. The style of each one is his own, and the sooner this fact is recognized and acted upon the better will teaching in English become. Language should be used as the means of interpreting thought.

A second element of weakness in this direction is the vagueness of the objects aimed at. If I can succeed in making my meaning clear on this point, one advanced step will have been taken.

Firstly, in writing, there are certain mechanical conditions that have to be complied with, such as the ability to write a clear, legible hand; to know how to spell correctly all the words used; to use capital letters properly, and to punctuate correctly, and to know when a sentence begins and ends, and where a paragraph begins and closes. The learner cannot acquire and retain this knowledge without becoming familiar with grammatical forms and some standards of accuracy and clearness in the use of his mother tongue. His habits of thought ought to give him some idea of clearness in the orderly arrangement of his sentences into paragraphs, and why one order in sentence arrangement is preferable to another. The arrangements of words into sentences will reveal to him the necessity for an extensive and varied vocabulary. All of this presupposes some reading in order to fix the points in didactic instruction.

Secondly, those teachers of English who have a cut and dried scheme, whatever grade the pupils may be, can never reach the best results. There should be no prescribed form of doing things except in the mechanical requirements mentioned. To follow models is to violate every instinct in nature by an attempt to level what no process, however great the pressure, can ever accomplish. The aim should be to get each pupil to express himself in his own way in the very choicest language possible, and he must do the choosing. This should be the spirit and aim of all successful teaching. There must be instilled into the learner's

mind the ambition to express himself well and in his own way, but his way should be such a one as embodies correctness, neatness, clearness and elegance. For the cultivation of exact expression, I know of no other species of composition equal to the written solutions of problems in arithmetic and algebra, ready to be put into print. This develops logical consecutiveness, each step in its proper place. The same exactness of arrangement in the treatment of other simple subjects will give the pupil a good idea of what is meant by logical unity in the unfolding and compacting of a subject. This appeals at once to the analytical faculty, and then it gives scope, after the analytical faculty has done its work, for the imagination to embellish and adorn the facts in accordance with the canons of taste. Subjects that interest are generally the best to be assigned for composition, and it may be better not to give the same subject to all the members of the same class. All slovenly, hasty writing in ward school or high schools, just to answer questions or to take notes, cannot be too strongly censured. Such work pulls down faster than the best teachers can build up.

Thirdly, the idea that English is not to be taught except by those who are assigned to teach it, is a strange species of mental hallucination that has its explanation in a misconception of the use and nature of our language. All instruction in composition should tend in the same direction, and there should not be any "cross-firing."

No effort should be made to encourage learned writing in either ward or high school. The spontaneous effort-outburst of each one's individuality is what should be aimed at. In due time fine writing will take care of itself. Let the pupil be impressed with this solemn fact, that if his writing gets into print and it is not able to stand the tests of scholarship, it reacts upon him. Then he will most likely work to produce such writing as will reflect credit upon himself. The final rule upon which stress should be placed is that each one does his best every time he writes.—*Education*.

DO CHILDREN KNOW THE ALPHABET?

BY WILLIAM WARNER BISHOP, POLYTECHNIC INSTITUTE, BROOKLYN.

At a recent meeting of the Long Island Library Club a question was raised which, it seems to me, is of some concern to students of our present educational programmes. The president of the club started a most interesting discussion by asking the assembled librarians if they had discovered any general lack of acquaintance with the order of the letters of the alphabet among children. An almost unanimous affirmative was given, and a series of anecdotes was told to illustrate the very general difficulty experienced, not alone in the use of a card catalogue, which is ever a mystery to some souls, but even in the use of dictionaries and encyclopædias. Moreover, and this is the point which I wish to bring to the attention of teachers, librarians who have for years been dealing with children, especially those in charge of "children's rooms," affirmed that ignorance of alphabetical order is more noticeable of late than in former years. Teachers present at the meeting joined in bearing testimony to the same fact. We have recently heard many and loud complaints that college freshmen can't spell; here comes an affirmation from competent observers that pupils in our grammar and high schools don't know their letters.

My own experience in dealing in a secondary school library with boys who have been well trained before coming to us confirms what was said at the meeting. I find that most of them seem to have little feeling for alphabetical order. While fully conscious of the fact that to master the order of an arbitrary set of symbols is a task which even mature minds sometimes fail to accomplish, I submit that, in view of the immensely important role played by the alphabet in most systems and schemes of arrangement, it would be well for those who

supervise educational programmes to ask themselves whether they provide in them some place where children are taught thoroughly their A B C's.

Every filing system, dictionary, encyclopædia, catalogue, bibliography and almost every sort of list has as its basis and key the alphabet. The old method of teaching the letters in a purely unintelligible and mechanical fashion, now most properly abandoned in many quarters, at least furnished a child with a set of order-symbols which he continued to use for the term of his natural life. Is it not wise to provide for their mastery at some early point in the school curriculum *as order-symbols*, and also to find a place for practice in using lists and books whose order of arrangement is alphabetical? I find that the ordinary explanation given for using a card catalogue—"Look for a card just as you would for a word in a dictionary"—fails to assist very many boys of fifteen.

I would not have it thought that I am referring to long-continued and systematic work in running down entries or in what librarians call "alphabetizing" cards. Such work very quickly numbs the alphabetic sense of all but the most hardened experts. The difficulties to which I am calling attention have been reported in the case of very simple and elementary catalogues, dictionaries and large-print reference books. That the difficulties exist cannot be doubted. A small amount of forethought and effort should be sufficient to meet them, once they are recognized.

BY FRANK A. MANNY, ETHICAL CULTURE SCHOOLS, NEW YORK.

I recently gave a test to the children of our school from the second grade through the eighth on the matter of ability to write the letters in alphabetical order. As they have all been taught to

read by practically the same method, it is a fair test, and represents a period of seven years, from the first year after learning to read until they are almost ready for the high school.

There is a steady development from year to year. We made no trial in the first grade, as there the children practically pay no attention to letters as such. In the second grade they begin to differentiate, but even in this grade their spelling, etc., is rather of words as wholes, although considerable analytical work is done. In this grade some of the children

took as long as nine minutes to write the alphabet, while one did it as quickly as one-half a minute. The quickest time made by any pupil was one-quarter of a minute, and the quickest average time for a class was in the eighth grade—on second trial they averaged three-quarters of a minute.

I think that everyone will agree that this does not indicate that modern methods of teaching reading necessarily prevent students from mastery over this very important tool for reference.—*Educational Review*.

ACT THE TRUTH.

BY DR. A. S. DRAPER,

University of Illinois.

Act the truth. Do not pretend to know things you do not know. Do not insist upon things about which you are uncertain. Even a child does not expect a teacher to be the embodiment of all wisdom. If she claims it, he knows she is masquerading; if she admits a doubt, he knows she is acting truly; he sees that he and his teacher have something in common; she has a stronger hold upon him.

I know a boy who handed up his written spelling lesson for correction. The teacher marked a word as incorrect, which he thought was spelled correctly. He gathered up his courage and told her she had made a mistake. She brushed him aside with an indignant remark, about doubting her inability to spell. In ten minutes he saw her in profound communion with the dictionary. He gained confidence. She said nothing, but seemed dejected. He put his pages in his pocket and went home, and studied his dictionary. He had spelled the word correctly. She had lost his good opinion forever. It was a serious loss, but who shall say she did not pay the proper penalty for her act? She had made a mistake. It was not serious at the outset. It was a

comparatively small matter that she had an erroneous impression about the spelling of a word. But persistence after she knew better was acting an untruth. It was utterly inexcusable. It was impolitic, too. Supposing she had given him only what was his due and said, "My boy, I was hasty and wrong about that; you were right; I will have to be more careful next time." He would have been exultant, but that would not have humiliated her. She would have gained his respect and friendship as well.

In another case the teacher told Mary, a young miss among her pupils, that Martha, her intimate friend, was headstrong and flighty and not doing well, and asked her to exert her influence over her and help her reclaim the wayward sister. The teacher told Martha the same things about Mary and exacted her help to recover the other sinner from destruction. Neither of the girls was in danger. The teacher did not think they were. She probably meant well enough. She meant to profit each girl by getting her interested in helping the other. But she did not think far enough or as truly as she might. The girls compared notes. They discovered there was an element of

deception about the matter and the result was not particularly helpful to the teacher.

There is a mathematical accuracy about the truth. It always fits together. There is no safe compromise ground. The danger signal is on the border line. Truth

or untruth may be acted as well as spoken. It is not necessary at all times to tell all that is true. But whatever is said and whatever is done in the schools is to be open and straightforward, wholly and within the bounds of truth.—*Journal of Education*.

WORK AND PLAY.

BY ALICE H. PUTNAM.

Children have to make an effort, a more or less conscious one, even to play. Nothing in this world can be had for nothing. The way a child reacts to the rhythms of work and play in his garden of life makes one think of the story of creation. The heavens and the earth were created—all spiritual and natural possibilities are present, but the earth, the natural side of these, is at first formless and empty. The child is in darkness as to any truth of nature or spirit. Then the waters are moved, and from above and beyond self a voice speaks and light appears. Day and night are born, rhythms and alternations in the feelings and thoughts appear and seem to disappear, yet the light is not taken out of the firmament, and the child feels that he can see his way. Through the process of perception and apperception more truths are seen, and like stars the sciences embody these and the children see the germs of them. Animals which have always been symbols of affection, be they gentle or fierce, are created; herbs and fruits, the natural and kindly thoughts and deeds, grow in this garden, and man, even the baby man, is set to keep it. In his work and in his play he finds the tree

of good and evil. He eats the fruit of it and must needs be allowed to make his first garments, his first appropriation of these knowledges of fig-leaves.

Everything in an intelligent course of study, from the nursery and kindergarden to the university, has reference to this gardening process, and if we are to consider this in the light of the kindergarten we cannot overlook Froebel's point of view:

1. That the means for attaining the end for which man is created are inherent in the constitution of man, as God made him. That is why there is work and play.

2. That he is related to a spiritual as well as to a natural world, and that these are worlds of cause and effect.

3. That there is an inflowing Divine life into human life, and only through this does man live.

4. That through impression and expression the human being comes to an awareness of these truths.

It seems to me that the whole of the scheme of education could be summed up in these principles, and the right balance of work and play demonstrates them.—*American Primary Teacher*.

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

THE AMERICAN FEDERAL STATE.

"The American Federal State" is an excellent book for the teacher's desk. We do not know where the teacher of American history or civil government can find a better book for reference. What a waste of pupil's time and what a poor preparation for citizenship comes from teaching civics from a book which gives a mere outline of our constitution, which, as Mr. Brice says, can be read in twenty-three minutes and which gives no idea of what our government is or does. For as Woodrow Wilson says: "The constitution in operation is manifestly a very different thing from the constitution of the books." Or, as Bagehot puts it: "An observer who looks at the living reality will wonder at the contrast to the paper description. He will see in the life much that is not in the books, and he will find in the rough practice many refinements of the literary theory." The really vital things to know are not how old a man must be to be President or Senator. The candidates will take care of that. But what the American needs to know is our political parties and their practices, our system of committee legislation, the power and duties of an educated man or woman in a municipality, the problems connected with our system of taxation, etc. This information was not before gathered together in a book suitable for a textbook, and perhaps "The American Federal State" is rather large for our common schools, yet the teacher should read the book and give her class the benefit of it. The book should find a place in the school library and the pupils should be referred to it often.

Each chapter is preceded by a valuable list of references and on the margins of the pages reference is given to the exact page of works that treat of the same topics. Each chapter is followed by a very suggestive list of questions, all of which make the book valuable for the teacher.

We have but one criticism to make against the book. We feel that we would read it with greater assurance and some slight errors would have been corrected had Mr. Ashley been in close contact with some member of our present congress and some active workers in the field of municipal and social reform. We do not know which is Mr. Ashley's State nor how the politicians in his State work with the educators, but we do know that a half day spent with Senator Dolliver while he was at our house

last summer gave us more information on how things are done at our national capital than we could get from reading a book. We do not make enough use of our politicians for educational purposes. There is too much theory in our schools and too many unknown or little understood practices in politics. How shall we bring the two together? Mr. Ashley's book will help. But let us have more by men who are educators, who are active politicians and who have the skill and practice to organize their information into as artistic and book-like form as has Mr. Ashley. (\$2. Macmillan & Co., New York.) A. D. CROMWELL.

THE SOCIAL SPIRIT IN AMERICA AND THE AMERICAN FEDERAL STATE.

If education or rather schooling may be defined as character building for citizenship, then it becomes very necessary for the teacher to know what kind of character is most to be desired among us and what kind of knowledge makes most for good citizenship in our government.

"The Social Spirit in America," which is now just entering upon its second edition—the former edition was published by Flood & Vincent for the Chautauqua Reading Course—is one of those works which properly belong to the field of social reform. It is a pity that people, teachers especially, do not make any distinction between sociology and social reform. Sociology is a science and as such can only gather and classify knowledge. Sociology advocates nothing. But social reform is an art and as such aims to tell us what to do to live in greater peace and harmony with our fellow men.

It happens that in the field of social reform many well meaning individuals of limited vision and narrow experience advocate things which if put into practice can result only in injury to society. Man is the most complex of complex animals, and his social life is his most complex life. Ignorance in prescribing for social remedies works injury just as sure as in medicine or pharmacy. How necessary then that the writer in the field of social reform be a man or woman of deep thought and wide culture! This Dr. Henderson, the author of "The Social Spirit in America," certainly is, as can be proven by the fact that one of the

great German universities gave him last summer a high degree for his work in this field.

"The Social Spirit in America" is packed full of sound practical suggestions. The chapters on Home Making as a Social Art, Friendly Circles of Woman Wage Workers, Better Houses for the Poor, Public Health, the Social Spirit in the State Schools, etc., are filled with suggestions for the educator who can see beyond a book to the life that he is trying to prepare children to live.

If the difference between the educated and the uneducated is largely a matter of wants, then how helpful such sentences as:

"Even in our enlightened times we know of fine barbarians lingering late in civilized surroundings, who expend their income on ostrich feathers while they shiver without proper underwear."

"If children are poorly fed and scantily clothed in winter or set to exhausting labor too early, or if the house is unhealthy, if cleanliness is a lost art, if food gives dyspepsia instead of strength, if fuel fails when frost bites—then society finds upon its hands a heavier tax for cripples, insane, feeble-minded and paupers."

"He indeed who governs well leads the blind, but he that teaches gives him eyes. * * * The primary teacher is merely the mother's assistant."

We might go on multiplying quotations indefinitely, but we will leave the book with the remark that for the educator who believes that teaching a public school is more than hearing classes, this is a thoroughly good book. (\$1.50. Scott, Foresman & Co., Chicago.)

A. D. CROMWELL.

A MANUAL OF CIVICS.

Though Mr. C. W. Bardeen has written this book primarily for use in the schools of the State of New York, it will be found a valuable adjunct in the school work of other States. It contains a fund of information regarding the history and the philosophy of civics. A valuable feature of this work is the fact that the author recognizes the value of historical treatment in the study of civics. He says: "It presents frequent opportunities for comparison, always one of the most effective phases of teaching, and suggests frequent contrast of our condition with that of our forefathers, which leads to an appreciation of our privileges, and a sense of our duties. So closely related is civics with history and with political economy that it is often difficult to know when to draw the line in teaching."

This book is replete with cross-references, and the headlines indicate the topics treated on each page. Mr. Bardeen believes in our national government and in the laws of New York. In the preparation of this text it was his aim to teach the young to believe in them and to make the youthful mind politically intelligent. (\$1. C. W. Bardeen, Syracuse, N. Y.)

BRADISH'S STORIES OF COUNTRY LIFE.

This book, by Sarah Powers Bradish, is one of the latest additions to the well-known series of Eclectic School Readings, and the stories are suitable for reading in the fourth or fifth years. It presents in easy and interesting manner the yearly round of country life on a farm, with especial reference to the history of wheat from its planting to its grinding into flour at one of the great modern mills. Into this general framework are interwoven true narratives of horses and dogs, birds and little wild animals, describing traits that may be watched and verified by any observant child. To lend variety to the themes and to give a broader view of industrial life among the farm stories are scattered others relating to lumbering, coal and iron mining and the industries to which they give rise. The book is attractively illustrated and cannot fail to awaken interest in life in the country and to give the pupil a new and better knowledge of its varied activities. (40 cents. American Book Company, New York and Chicago.)

LEAVITT'S OUTLINE OF BOTANY.

This work was prepared at the request of the Botanical Department of Harvard University by Robert Greenleaf Leavitt of the Ames Botanical Laboratory. It was prepared to meet a specific demand, and combines, with great simplicity and definiteness in presentation, a careful selection and a judicious arrangement of matter. It offers: 1. A series of laboratory exercises in the morphology and physiology of phanerogams. 2. Directions for a practical study of typical cryptogams, representing the chief groups from the lowest to the highest. 3. A substantial body of information regarding the forms, activities and relationships of plants and supplementing the laboratory studies.

The laboratory work is so chosen that it is adapted both to schools possessing extensive equipments and to those with only limited apparatus. The order of arrangement follows in the main that of Gray, the standard, and while morphology and physiology are fully treated, special attention is paid to ecology, to the relations of the plant with its environment. There are nearly four hundred carefully drawn illustrations in the book. The appendix contains full descriptions of the necessary laboratory materials, with directions for their use, as well as suggestions for helpful exercises, addressed primarily to the teacher, and indicating the most effective pedagogical methods. On the whole, the work is a noteworthy addition to botanical text-books, as it presents the latest advances for practical use in an elementary course. (\$1. American Book Company, New York and Chicago.)

NORTHERN EUROPE.

This volume is composed of descriptions and stories which portray interesting aspects of the following subjects: The Forøe Islands, Life in Norway, Scenes in Holland and Belgium, Studies of French Life, Life in the Alps and A Journey Down the Moselle. (25 cents. Ginn and Company, Boston and Chicago.)

STOKES' TEN COMMON TREES.

This is the latest addition to the well-known series of Eclectic School Readings. In the form of interesting stories it presents a series of simple nature lessons dealing with ten of the trees most familiar to children. These lessons describe the life of the tree and its relations with the soil, moisture, winds and insects. The topics are so arranged that the teacher can readily accompany each lesson with actual na-

ture work. The book is illustrated by carefully made and accurate drawings and contains a list of articles, in both prose and poetry, referring to the tree families described, and suitable for reading and recitation. (40 cents. American Book Company, New York and Chicago.)

THE WIDE WORLD.

"The Wide World" gives a brief, comprehensive survey of child life in Japan, Egypt, Holland, France, Switzerland, Sweden, South America, and Alaska. Among the interesting sketches are Barbarian Babies, Dining with a Mandarin, Some Little Egyptians, A Visit to Sweden, An Eskimo Breakfast. It is attractive in binding, convenient in size, and low in price. The work is particularly adapted for reading in the six and seventh grades. (25 cents. Ginn and Company, Boston and Chicago.)

Educational Articles in the April Magazines.

"Indian Children at School," Anne O'Hogan.....	<i>Ainslee's Magazine</i>
"Pan-American Diplomacy," John W. Foster.....	<i>Atlantic Monthly</i>
"Our State University," An Athenian.....	<i>Atlantic Monthly</i>
"The Planting of School Grounds," Sarah Huntington Hooker.....	<i>Country Life</i>
"Fifty Years of Synthetical Chemistry," Carl Snyder.....	<i>Harper's Magazine</i>
"The Relation of Animals and Plants," N. S. Shaler.....	<i>Harper's Magazine</i>
"The Problem of the Universe," Prof. Simon Newcomb.....	<i>International Monthly</i>
"Contemporary French Philosophy," Alfred Fouillee.....	<i>International Monthly</i>
"The Story of the States—Montana," Earl Mayo.....	<i>Pearson's Magazine</i>
"Some Noteworthy Scholars," Daniel C. Gilman.....	<i>Scribner's Magazine</i>
"The Making of an Orator," Charles W. Emerson.....	<i>Success</i>
"The Japanese University for Woman," Ernest W. Clement.....	<i>The Chautauquan</i>
"Formative Incidents in American Diplomacy," Edwin Erle Sparks....	<i>The Chautauquan</i>
"The Influence of Victor Hugo," Edmund Gosse.....	<i>The Cosmopolitan</i>
"Canton the Home of Li-Hung-Chang," W. G. Irwin.....	<i>The Era</i>
"The Disintegration and Reconstruction of the Curriculum," Prof. G. T. Ladd.....	<i>The Forum</i>
"Our Chaotic Education," Prof. Paul H. Hanus.....	<i>The Forum</i>
"Seeing Things Outdoors," Prof. S. C. Schmucker.....	<i>The Ladies' Home Journal</i>
"Trend of University and College Education in the United States," Dr. W. R. Harper.....	<i>The North American Review</i>
"Russian Schools and the Holy Synod," Prince P. Kropotkin.....	<i>The North American Review</i>
"Reflections on the State of Cuba," Right Hon. James Bryce.....	<i>The North American Review</i>

GOLD MEDAL PARIS EXPOSITION.

HIGHEST AWARD PAN-AMERICAN EXPOSITION.



THE PERRY PICTURES

ONE CENT EACH

for 25 or more.
On paper 5¼ by 8.
Assorted as desired.

120 for \$1.00.

Send 35 cents for 35 April pictures, including

Paul Revere	Froebel
Old North Church	Shakespeare
Minute Man	Trees (for Arbor Day)

or send 25 cents for 25 Art Pictures,

The one-cent pictures are 5 to 8 times this size.
or send 25 cents for 13 Pictures in Colors; Birds, Animals, etc. The Bird Pictures are especially valuable for Spring Study. They cost only two cents each in lots of 13 or more, and we have over four hundred subjects.

Mention this paper and send two-cent stamp for catalogue and sample of Pictures in colors and two samples of the Perry Pictures.

Be sure to see the new Boston Edition.

Address,

THE PERRY PICTURES COMPANY

Box 18, MALDEN, MASS.

TEACHERS' SOUVENIRS!

OVER 100 DESIGNS.

Prices: 1 cent each and upward. A complete line of closing and holiday supplies. Send address of 4 active teachers for valuable samples FREE. The H. G. Phillips School Supply House, Williamsport, Pa.

Of Birds of Lakeside and Prairie

By **EDWARD B. CLARK.**

150 pages 6x8; sixteen illustrations in color. Price \$1.

This book is a most interesting running commentary on birds and bird life as the author has known them in country and city. It is certainly a most valuable source of information to the school that takes an interest in observing bird life. The illustrations are Mumford's excellent reproductions in the natural colors of birds.—*School and Home Educator, March, 1902.*

I have stopped teaching, but think I cannot get along without your delightful magazine, **BIRDS AND NATURE.**

MRS. EDWARD BEDDOE.

Sioux Falls, S.D., March 20, 1902.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

JEAN MITCHELL'S SCHOOL

BY ANGELINA WRAY

Supt. L. H. Jones, of the Cleveland, O., public schools, writes:

"I have read and re-read Jean Mitchell's School. The book is a worthy contribution to the school thought and practice of our time. It is concrete pedagogy with life in it. I wish all the teachers in the country, from the first primary grade to the presidents of the great universities, might read it and have its kindly, helpful spirit breathed into them.

JEAN MITCHELL'S SCHOOL is superior beyond all comparison as a story of the *School*. Miss Wray has given us in Jean Mitchell, the teacher pure and simple in the midst of her wonderful work. The drama here unfolded is that belonging to this fundamental institution—the school. The teacher is a real heroine, winning, one by one, the lawless and the churlish among her pupils to a spirit of loving obedience and mutual regard and good fellowship.

This volume of 244 pages shows the growth of the "Ideal School" from month to month throughout the year. It is beautifully illustrated with drawings from nature studies appropriate to each month of the school year, and with half-tone pictures of the dramatic scenes. Elegantly bound in cloth. Price, \$1.25 a year.

Ask for our catalogues of Books for Children for
Supplementary Reading and of Books for Teachers.

SCHOOL AND HOME EDUCATION, Geo. P. Brown, Editor, is the foremost journal of the country for the thinking teacher. \$1.25.

— ADDRESS —

The Public School Publishing Company

BLOOMINGTON, ILLINOIS

Are you looking for a better Arithmetic?

We would like to tell you
about the newest and the best.

B. F. Johnson Publishing Co.
Richmond, Va.

\$1,500 Guaranteed Yearly

To high class man or woman, with chance for promotion and advanced salary, to have charge small office at home or in home town, to attend to correspondence, advertising and other work. Business of highest order and backed by solid men financially and politically. A great opportunity for the right person. Enclose self-addressed stamped envelope for full particulars to WALTER B. REDMAN, GENERAL SUPERINTENDENT, Corcoran Building, Opposite United States Treasury, WASHINGTON, D. C.

Wild Birds IN City Parks

By Herbert Eugene Walter, and
Alice Hall Walter, Chicago, 1902.
Pocket Edition, pp. 48, paper,
with Chart Showing Migration
of Birds. Price, 20 cents.

Every Chicagoan who is interested in birds and visits our parks should have a copy of this handy little book. Professor Walter conceived the importance of the work while teaching nature in the North Division High School of Chicago. The authors state that "The object of this little book is to furnish those who may be interested in making the acquaintance of wild birds, with a simple letter of introduction to one hundred birds which may be seen in and around Chicago." Complete descriptions are not given. The essential and striking characteristics that are readily noticed are mentioned. Following the notes on each bird the reader's attention is called to the birds for which it might be mistaken. A table showing the approximate time of arrival in the migration of the birds is appended.

Fully three-fourths of the birds mentioned by Mr. and Mrs. Walter have been illustrated in colors in BIRDS AND NATURE. A portfolio of these pictures would form a valuable adjunct for the readers of this little Chicago book.

A. W. MUMFORD, Publisher,
203 Michigan Ave., CHICAGO.

A-B-C BOOK OF BIRDS

— BY —

MARY CATHERINE JUDD.

**With Nonsense Rhymes for the Little Ones
and Prosy Sense for Older Ones. \$1.**

"Resplendent in bright red binding, and with two beautifully executed bird portraits in natural colors on the outside covers, this bird book is of exceptional attractiveness and worth. The pages measure almost eight by eleven inches. Twenty-six superbly printed color half-tones of bird life are accompanied each by two pages of reading matter—one a very clever jingle, the other a compact prose statement of interesting and instructive information about the bird, his habit, and his haunts, Mothers, teachers and young folks will all find choice material here."—*Sunday-School Times.*

A. W. MUMFORD, Publisher,
203 Michigan Avenue, CHICAGO.

Of BIRDS of SONG \$1. and STORY

Birds of Song and Story. By Elizabeth and Joseph Grinnell. The authors are well known lovers of birds and have written much of interest about bird life, giving their own observations. They have carefully studied the haunts of their feathered friends and are acquainted with the folklore and legends relating to birds. The birds who receive special attention in this book are the robin, mocking bird, cat bird, hermit thrush, grosbeak, oriole, canary, sparrow, yellow bird, bluebird, tanager, meadow-lark, skylark and bobolink. Besides interesting chapters on these birds, the authors describe the female birds at meeting time and relate some legends, one of them giving the origin of the birds. Teachers will find "Birds of Song and Story" a desirable book to read to their pupils. There is a great deal of information about the habits of birds contained in the volume.—*Utica Press.*

OF BIRDS AND NATURE BOOKS.

All these pictures are remarkably fine and accurate in color as well as in outline, not for a moment to be compared with the pictures often put into children's books for the sake of the color.
C. W. BARDEEN.

Stories and Legends for Young People

By JUDGE J. W. DONOVAN.

A Beautiful Book

With nearly two hundred pages, made up of a score and more of apt illustrations, pithy **STORIES** and rare **LEGENDS** from the **GREEK, LATIN, GERMAN, ENGLISH** and **SPANISH**—each with its lesson clearly defined—legends reduced and adapted to **TEACHERS, SCHOOLS** and the **HOME**, by a writer of large teaching and lecture experience. **IT OPENS A DOOR TO A NEW WORLD.** It is a **BOON** to **TEACHERS** and is prepared with great care and made exceedingly fascinating to **BOYS** and **GIRLS** just dreaming how they may get on in life. It is worth ten times its cost to any family with growing children. **IT MAY LEAD THEM TO ATTAIN THEIR AMBITION.** It has passed the critical approval of **COLLEGE** and **HIGH SCHOOL TEACHERS** in **NEW YORK, WASHINGTON** and **CHICAGO.** **IT IS A WORK OF ART.**

Sent postpaid on receipt of twenty-five two-cent stamps.

Typical Forest Trees in Photogravure 9x12.

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40c. a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER,
Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need.

Yours truly,
G. STRAUBENMULLER,
Associate Superintendent, New York.

No teacher should be without a set of our Forest Trees.

Sample sent on request.

A. W. Mumford, Publisher

203 Michigan Avenue,

CHICAGO, ILL.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors.

Price: Two cents each assorted as desired; the 504 for only \$5.04; only one cent each assorted as desired to subscribers to BIRDS AND NATURE or REVIEW of EDUCATION, if not in arrears; 75 of these pictures and BIRDS AND NATURE one year for \$2.00. See our catalogue for further information. Mark pictures desired and return this sheet

To A. W. MUMFORD,

203 Michigan Ave., Chicago.

Date.....

I enclose.....for which please send the following order to

Name,.....

Street,.....

P. O.

State,

- | | | |
|----------------------------------|--------------------------------------|-------------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Turnstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parrakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowned Pigeon. |
| 21 Bluebird. | 72 Sora Rail. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbill. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Woodpecker. |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | 147 Bartramian Sandpiper. |
| 47 Indigo Bird. | 98 Snow Bunting. | 148 Nightingale. |
| 48 Night Hawk. | 99 Junco. | 149 Roseate Spoonbill. |
| 49 Wood Thrush. | 100 Kingbird. | 150 Dickcissel. |
| 50 Catbird. | 101 Summer Tanager. | |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rhea.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Red.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cincera.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant: Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Parakeet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant: Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant: Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant: Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant: Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant: Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany—(Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 } New England Aster.
- 348 } Late Purple Aster.
- 349 Wild Yellow or Canadian Lily.
- 350 Vesper Sparrow.
- 351 Calico Bass.
- 352 Mountain Lake.
- 353 Fruit: Banana.
- 354 } Oswego Tea or Bee Balm.
- 355 } Fringed Gentian.
- 356 } Closed or Blind Gentian.
- 357 } Tall or Giant Sunflower.
- 358 } Black-eyed Susan or Oxyeye Daisy.
- 359 Wild Columbine.
- 360 American Redstart.
- 361 Trout.
- 362 Ocean Waves.
- 363 Domestic Fowls.
- 364 Western Willet.
- 365 Buffle-Head.
- 366 American Eared Grebe.
- 367 Louisiana Tanager.
- 368 Luna and Polyphemus Moths.
- 369 Prong-horned Antelope.
- 370 Sensitive Plant.
- 371 Medicinal Plant: Almond.
- 372 Western Horned Owl.
- 373 Long-crested Jay.
- 374 Fulvous Tree-duck.
- 375 Red-breasted Sapsucker.
- 376 Prometheus and Scorpion Moths.
- 377 Irish Setter.
- 378 Pitcher Plant (Nepenthes).
- 379 Medicinal Plant: Mandrake.
- 380 Hawk Owl.
- 381 Knot or Robin Snipe.
- 382 White-winged Crossbill.
- 383 Townsend's Warbler.
- 384 Water Shells.
- 385 Collared Lizard.
- 386 Fruit: Apple.
- 387 Medicinal Plant: Vanilla.
- 388 American Rough-legged and Young Red-tailed Hawks.
- 389 Short-billed Dowitcher.
- 390 Great-tailed Grackle.
- 391 Hooded Warbler.
- 392 Land Shells.
- 393 Gila Monster.
- 394 Medicinal Plant: Cassia Cinamon.
- 395 Fruit: Pomegranate.
- 396 Owl Parrot.
- 397 Gray Parrot.
- 398 White Pelican.
- 399 Marbled Murrelet.
- 400 Black Bear.
- 401 Pond and River Shells.
- 402 Fruit: Orange.
- 403 Medicinal Plant: Pepper.
- 404 Crested Curassow.
- 405 Harlequin Duck.
- 406 Canada Grouse.
- 407 Dovekie.
- 408 Beaver.
- 409 Marine Shells.
- 410 Fruit: Lemon.
- 411 Medicinal Plant: Cubebe.
- 412 Audubon's Oriole.
- 413 Marbled Godwit.
- 414 Rusty Blackbird or Grackle.
- 415 Surf Scoter.
- 416 American Elk.
- 417 Nautilus Shells.
- 418 Flowers: Mountain Laurel.
- 419 Trailing Arbutus.
- 420 Medicinal Plant: Hops.
- 421 Bullock's Oriole.
- 422 Sanderling.
- 423 Great Northern Shrike.
- 424 Brandt's Cormorant.
- 425 Buffalo.
- 426 Agates.
- 427 Flowers: Great Mullein.
- 428 Moth Mullein.
- 429 Medicinal Plant: Cocoa Fruit.

425 Anna's Hummingbird
 426 Rufous Hummingbird
 427 White-throated Sparrow
 428 Parula Warbler
 429 Tourmaline
 430 Indian Elephant
 431 Walrus
 432 Bengal Tiger
 433 Yellow-bellied Flycatcher
 434 Olive-sided Flycatcher
 435 Tree Sparrow
 436 Black-throated Green Warbler
 437 Beryl
 438 African Lion
 439 Alaskan Moose
 440 Polar Bear
 441 Pine Grosbeak
 442 Field Sparrow
 443 Carolina Wren
 444 Black-poll Warbler
 445 Turquoise
 446 Striped Hyena

447 Giraffe
 448 Miriki Spider Monkey
 449 White-eyed Vireo
 450 Rivoli Hummingbird
 451 Worm-eating Warbler
 452 Chipping Sparrow
 453 Topaz
 454 Rhesus Monkey
 455 Asiatic or Bactrian Camel
 456 Zebra
 457 Golden-crowned Kinglet
 458 King Rail
 459 Brown-headed Nuthatch
 460 Sharp-shinned Hawk
 461 Quartz
 462 Greenland Whale
 463 Bur or Spear Thistle and Pasture or Fragrant Thistle
 464 Irish Moss
 465 Blue-headed Vireo
 466 California Thrasher
 467 Broad-tailed Hummingbird

468 Broad-winged Hawk
 469 Quartz
 470 Domestic Cat
 471 Soapwort or Bouncing Bet and Snake-head or Turtle-head
 472 Sugar Cane
 473 Winter Wren
 474 Leconte's Sparrow
 475 Northern Phalarope
 476 Hairy Woodpecker
 477 Opal
 478 Purple Violet and Hepatica
 479 Sheep
 480 English Walnut
 481 Black-chinned Hummingbird
 482 Burrowing Owl
 483 Audubon's Warbler
 484 Red-backed Sandpiper
 485 Garnet
 486 Black Cohosh and Arrow Head
 487 Cows
 488 Sweet Flag

489 Green Heron
 490 Varied Thrush
 491 Short-billed Marsh Wren
 492 Prairie Warbler
 493 Birth Stones
 494 Horse
 495 Robin's Plantain and Blue Vervain
 496 Medicinal Plant: Cotton

497 Swallow-tailed Kite
 498 Alice's Thrush
 499 Carolina Chickadee
 500 Violet-green Swallow
 501 Starfish
 502 "Old Faithful" Geyser
 503 Sea or Marsh Pink and Fireweed
 504 Medicinal Plant: Tobacco

A SET INCLUDING ONE OF EACH OF THE ABOVE

504 PICTURES FOR \$5.04.

Order some of these Pictures for Bird Day and Arbor Day.

A. W. MUMFORD, PUBLISHER,

203 Michigan Ave., Chicago.

For the enclosed check, \$6.23, kindly send me the 488 pictures of BIRDS AND NATURE, one game of Birds and the Typical Forest Trees in photogravure, three series
DR. H. A. ZIMMERMAN.
 Youngstown, Ohio, March 16, 1902.

Please find enclosed money order for \$5.88, for which please send me three series of Typical Forest Trees in photogravure, and also a set of the BIRDS AND NATURE pictures.
CHAS. W. WELCH.
 Stoughton, Mass., March 22, 1902.

Please send me the set of 488 BIRDS AND NATURE pictures, for which you will find enclosed check for \$4.88.
N. TRIPP.
 Forest, Ont., April 5, 1902.

I enclose money order for \$4.88, for which please send me the 488 plates of BIRDS AND NATURE.
G. S. BRIANT.
 Parkersburg, W. Va., April 2, 1902.

Enclosed find check for \$4.88, for which please send me the 488 BIRDS AND NATURE pictures.
SECRETARY, Board of Education.
 Schenectady, New York, March 28, 1902.

You will find enclosed an express order for \$4.88, for which please send me a complete set (488) of your BIRDS AND NATURE pictures.
FRED J. HART.
 Barrie, Ont., March 2, 1902.

I enclose a money order for \$4.88, for which please send me 488 BIRDS AND NATURE pictures.
H. HENRY JOHNSTONE.
 Edinburgh, Scotland, March 5, 1902.

Quick Work at Long Distance.

University of Wyoming.—(Special delivery letter.)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—*Prof. Frank H. H. Roberts* (who went there through this agency in 1899), March 24, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? **Telegraph.**—To *Principal W. B. Carhart*, Coeymans, N. Y., March 24.

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—*Mr. Carhart*, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To *President Smiley*, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—*President Smiley*, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To *Mr. Carhart*.

Telegram.—Advise me regarding trial, for how long.—*Mr. Carhart*, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To *Mr. Carhart*, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—*Mr. Carhart*, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To *President Smiley*, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—*Mr. Carhart*, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To *Mr. Carhart*, March 27.

The School Bulletin Agency
C. W. BARDEEN, Syracuse, N. Y.

... THE ... Fine Arts Journal IS PUTTING OUT A MATTED PICTURE

Proposition which is unquestionably the greatest offer for new subscribers that has ever been made by any magazine.

They give away with every copy issued of THE FINE ARTS JOURNAL from February, 1902, to February, 1903, a matted picture, size 8x10 inches, ready for framing. These pictures are guaranteed to be from the brush of some celebrated modern painter and never before reproduced or published.

That you may not fail to receive the complete series of twelve which goes with the monthly issues of the magazine, you should subscribe at once for THE FINE ARTS JOURNAL for one year—subscription price \$1.75.

This set when framed will help to beautify the home and will be especially attractive in the school-room. The educational value of these works of Art must appeal to educators and teachers, as well as those who delight in artistic surroundings.

THE FINE ARTS JOURNAL is all that the name implies. Size 9½x12 inches, containing eighty-four pages. Departments are devoted to Art, Decorative Art, Architecture, Music, Literature, Book Reviews, Education and Travel. Subscription price is \$1.75 per year, strictly in advance. Agents wanted everywhere. Clubs of Ten for \$1.50 each, or Clubs of Twenty-five \$1.25 each. Send for Sample Copy—15 Cents.

Subscription Department FINE ARTS JOURNAL,
HERALD BUILDING, CHICAGO, ILL.

Birds and Nature

Buy Books You Won't Outgrow

"Enclosed find Money Order for \$40 for which please send seven sets of the BIRDS AND NATURE magazines, and four sets of the colored pictures to Rev. Marist Brothers, 153 E. 76th St., New York, N. Y., marked enclosure to France."

BROTHER HENRY, Laval College, Que.

I like BIRDS AND NATURE the best of any magazine I have ever taken.
Fall River, Mass., March 9, 1902.

HELEN G. SMITH.

One should buy books he will not outgrow. There has never been published before a series of nature and outdoor books to compare with these and they are of interest alike to young and old—the most popular gift and holiday books.

These books have cost over \$80,000 and were it not for the fact that the sales are large and increasing we could not make the following low prices :

Set of 11 volumes, cloth, containing 496 plates..... \$11.00

Set of 5 double volumes, half morocco, containing 456 plates 10.00

The unbound magazines '97, '98, '99, 1900, 1901, 1902..... 6.00

The 504 colored plates 5.04

We always recommend the set of five double volumes, half morocco, \$10.00; the regular price is \$15.

A. W. MUMFORD, Publisher,

706 Fine Arts Building,

Chicago, Ill.

I enclose \$2.80 in payment of REVIEW OF EDUCATION for three years ending December, 1903, I find your magazine in its new form very useful.

MAX WEST.

Columbia University, New York, March 12, 1902.

Please send to me, 1720 Old Colony Building, 488 BIRDS AND NATURE pictures for which I enclose check for \$4.88.

CHAS. H. FERRY.

Chicago, April 10, 1902.

WANTED.---Back Numbers of Child-Study Monthly.

The following numbers of the Child-Study Monthly are desired by the publisher:

November-December '95, April '96, April '97, June-July '97, November 1900, March 1901.

Anyone sending us copies of these numbers will be credited two months on their subscription to the Review of Education for each number sent.

A. W. MUMFORD, PUBLISHER,

CHICAGO, ILL.

"THE BOOK OF THE PRESIDENTS"

By Gen. Chas. H. Grosvenor
20 years Member of Congress

Pronounced the most sumptuous and magnificently beautiful book ever issued in the United States. Contains 28 large full-page photogravure portraits, reproduced from the best paintings in the White House, the Congressional Library, the Corcoran Art Gallery of Washington and the Capitol Building. Both President Roosevelt and President McKinley posed specially in the White House for their portraits to be used only and exclusively in this work. This is the greatest honor ever conferred on any publication issued in this country. It is a work that will reflect credit upon the nation. Every patriotic American citizen will buy it. High class men and women employed on commission, or part salary and part commission. \$1500 guaranteed for a year's work. Also manager wanted to have charge of agents and correspondence, look after the advertising and other work. Fortunes can be made on this publication within the next three years. Write for terms and circulars. Address

THE CONTINENTAL PRESS,
Corcoran Building, Opp. U. S. Treasury,
WASHINGTON, D. C.

"ST. NICHOLAS"

FOR YOUNG FOLKS

Are there any boys or girls in your home? If so, do you want them to grow up familiar with the best literature and art, and with all their best impulses quickened? There is a way to do it, at an expense of less than one cent a day,—a way to have in your home the greatest educational influence of our time.

"St. Nicholas for Young Folks" is the medium—a magazine absolutely unequalled in the literature of the world. It is recommended by educators everywhere,—it contains only the very best and most helpful and entertaining literature, and it is illustrated by the greatest of American illustrators.

IN 1903

some new features are to be introduced into this famous periodical—one is the printing of long stories complete in a single number,—no serials. A splendid group of stories by the best living writers for young folks has been gathered for this purpose.

"NATURE STUDY"

is now a great feature of St. Nicholas. The young readers ask questions and they are answered in a department called "Nature and Science." Private schools take the magazine for this alone. The "St. Nicholas League" is an organization of St. Nicholas readers wherein prizes are offered for the best pictures, stories, poems, etc.

\$3.00 a year.

November and December numbers free to new subscribers who begin with January. (November begins the volume.)

A beautiful copy (in color) of any issue of St. Nicholas sent free to any boy and girl. Address THE CENTURY CO., Union Square, New York.

THE BEST THING FOR
THAT TIRED FEELING
IN A SCHOOL ROOM IS



WHICH KEEPS

SCHOOL LIFE MOVING

WITH THE

MOTION OF THE WORLD

It is Geography whose waters are Alive with the fleets of Commerce and its cities humming with the noise of Industry.

It is Arithmetic in Action, in the work of the Counting Room, in the Calculations of the Laboratory, in the Financial Operations of Governments, in the Rise and Fall of Prices, in all the busy Life of Trade.

It is Nature Study full of the Motion and Mystery of Life in the Water, Woods and Fields.

It is a Language Course which Stimulates expression by Supplying Vivid Impressions of the World's Great Goings-On.

It is an Art Course which Kindles in Mind and Eye the impulse for Graphic Reproduction that Guided the Hand of Giotto Tracing the Pictures of his Sheep upon the Rocks.

It is a History of the Present; of Politics where Living Issues are at Stake; of Conventions and Parliaments ringing with the Voices of Living Men.

IT MARKS AN EPOCH IN
MODERN EDUCATION

Many schools take more than a hundred copies weekly. The unique two-cent-a-week plan makes this easy. To the teacher in each room in which 10 or more copies are used is given a copy of the book

LIFE AS A SCHOOL STUDY

in which is shown how to use News in School Work and its application in detail to Geography, Drawing, Language, Arithmetic, Physiology, Nature Work, Physics, History, Civil Government and all other branches in the course. Send for free samples and the 2-cent-a-week plan.

SIXTEEN PAGES WEEKLY
BEAUTIFULLY ILLUSTRATED

A. W. MUMFORD

203 Michigan Ave., Chicago

Literature Game : : : : 25 cents

Game of Industries : : : : 25 cents

Each Game consists of 100 cards in neat box with directions for playing

—47—

What state ranks first in dairy products, wealth, population, commerce and manufactures?

NEW YORK.

What state ranks second in population and manufactures?

PENNSYLVANIA.

What state ranks first in the production of tobacco and hemp?

KENTUCKY.

What state ranks first in the production of wool?

OHIO.

—57—

WHAT novel wrought a great reform among the boarding schools of England?

NICHOLAS NICKELBY.

WHICH of the great Quintette Longfellow, Holmes, Lowell, Whittier and Emerson died last?

HOLMES.

WHAT famous poet lived in a house which General Washington occupied during the Revolution?

LONGFELLOW.

WHAT author was a physician, a professor, a poet, a scientist, an essayist and a wit.

HOLMES.

WHAT long English poem is composed of Indian legends?

LONGFELLOW'S HIAWATHA.

Directions for the Game.

1. Any number of persons may play this game.
 2. The dealer distributes one card at a time around the circle from the right to left until all have three cards. He then places the pack face downward on the table. The answer to each question follows the question.
 3. The player at the left of the dealer begins. He asks B at his left hand any question from any card in his hand. If B can answer it he takes the card and turns it face down on the table. If B does not answer the question it goes around the circle to the left, until it is answered, or all have had a chance. The one who answers it gets the card. If nobody answers the question A keeps the card in his hand, and B takes his turn at asking.
 4. Now B asks C at his left hand the second question in the same way, and so on.
 5. When any player has asked a question and given up a card to the one who answered it, he must draw another from the top of the pack, so that each player holds two cards in his hand all the time. If any player finds that he has a card from which nobody can answer any question, he may keep the card and draw another.
 6. The one who gets the most cards wins the game.
 7. The game may be played in partnership by any even number of players. The partners sit opposite each other and keep their cards together.
 8. In a large company it may be necessary to vary the rules a little. A less number than three cards may be given to each player, if the company is so large that the pack does not go around.
- At school, a nice way is to choose sides the same as a spelling match. Many other games may be played with the cards.

A. W. MUMFORD, Pub., Chicago, Ill.

GAME OF BIRDS. Illustrations of popular birds in colors, true to nature, on 52 finely enameled cards, $2\frac{1}{2} \times 3\frac{1}{2}$ inches. Makes the identification of our birds simple and positive. Price, 35c.

These games are so interesting and instructive you'll certainly enjoy them. Just what you have been wanting for the school and home. Each game enclosed in case, with full directions for playing.

SPECIAL OFFER :: The 3 Games for 75 cents

A. W. Mumford, Publisher, 203 Michigan Avenue, CHICAGO

OF BIRDS AND NATURE, \$1.50.

I enclose New York draft for \$7.20 in payment of six copies of **BIRDS AND NATURE**, to be sent to our Library for one year.

JAS. W. McLANE.

Lincoln High School,
Cleveland, O., Mar. 24,
1902.

My children have a complete set of **BIRDS AND NATURE** and thoroughly enjoy the books. I ordered the 488 pictures so that they might have them to arrange and classify. They find them an unending source of amusement and instruction.

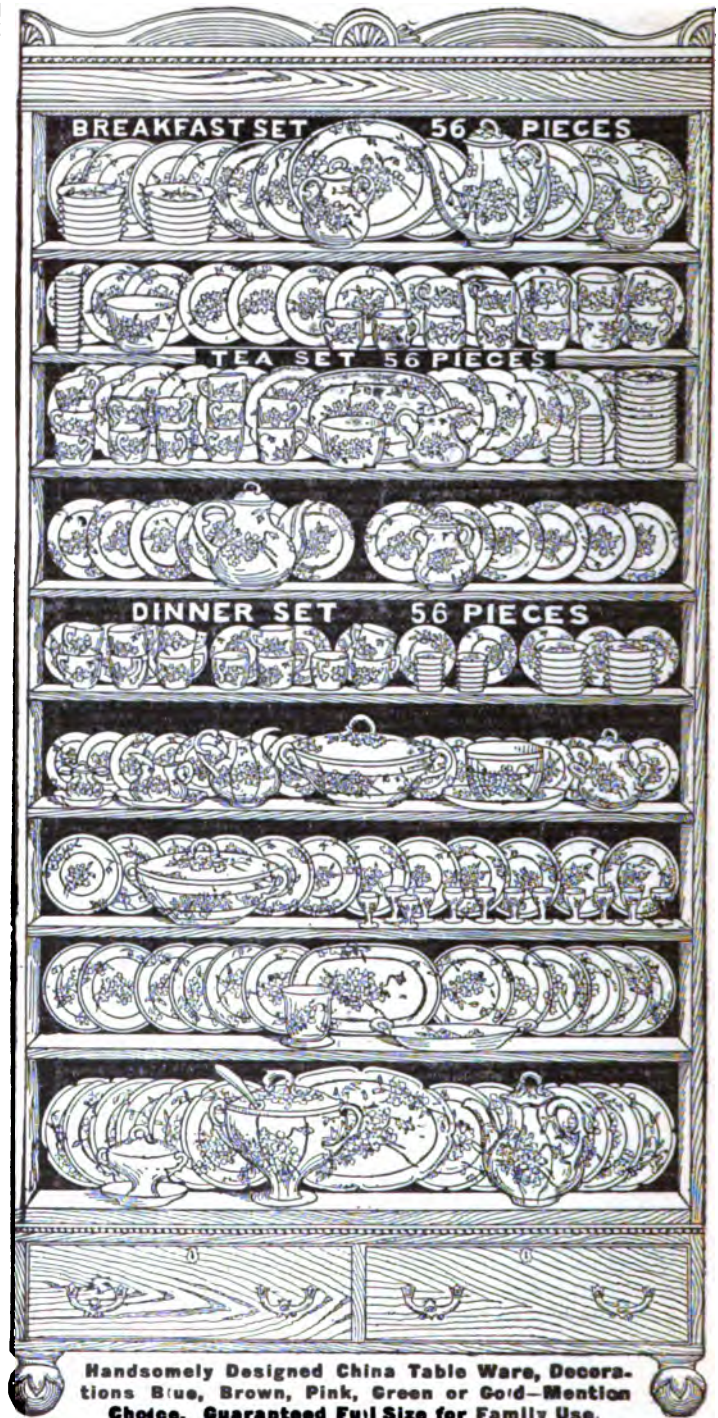
EDMUND D. BARRY.

Grand Rapids, Mich.,
Mar. 26, 1902.

I think your **BIRDS AND NATURE** is the best thing of the kind I have ever seen. Enclosed please find Money Order for \$17.50 for which please send me the five double volumes **BIRDS AND NATURE**, 500 Birds and Nature pictures, the three series of Forest Trees, and also credit my subscription for 1902 and send the 75 assorted pictures.

JNO. JOUEY.

New Orleans, La., Mar.
25, 1902.



56 PIECES BREAKFAST SETS, DINNER SETS, - - TEA SETS, - - - **FREE!**



Watch Warranted for 20 Yrs.

We give you a **56 PIECE BREAKFAST, DINNER, or TEA-SET**—full size for family use—**FREE OF COST.** Here is your opportunity. Do not miss it. This means exactly what it says. We give the Sets away **ABSOLUTELY free.** There is no fraud or humbug in this announcement. There is no juggling of words, no misrepresentation, no deception, no misunderstanding, no manipulation of words or phrases intended to deceive or befuddle you. All is plain, open, above board, and understandable. We will do what we say and give what we agree. When we state **WE GIVE A 56 PIECE SET,** we do not mean that we will send an OFFER or proposition, a plan used by others so often to entrap and deceive, but **WE GUARANTEE** to forward the **real genuine goods themselves.** Choice given of a Breakfast, Dinner, or Tea Set—each set consisting of 56 Pieces, beautifully decorated and artistically designed. In addition to the 56 Piece Sets, every person gets an elegant Watch warranted for 20 years, or 12 Silver Plated Tea Spoons, 6 Table Knives, 6 Table Forks, 6 Table Spoons, a pair of ladies' or gents' Kid Gloves, or a box of one dozen handsome Stockings. (Gloves and Stockings for ladies or gents—all sizes and colors.)



6 Knives, 6 Forks, 6 Table Spoons, & 12 Tea Spoons

REASONS FOR LIBERALITY.

We manufacture the celebrated family and household remedy for men, women, and children—**BLOOD GLOBULES**, a specific for all blood diseases, nervous disorders, sluggish circulation, impaired vitality, rheumatism, female complaints, liver, kidney, and stomach troubles. We guarantee it to be the best remedy on earth for these diseases. We wish to introduce "**BLOOD GLOBULES**" in thousands of homes where it has never been used, and have set aside **\$25,000 CASH TO BE SPENT** in giving away valuable and useful presents to those who are willing to help us.

On request we will send you 7 boxes of Blood Globules, all charges paid, which are to be sold at 25 cents per box, remit the \$1.75 collected and we will present you with a 56 Piece Breakfast, Dinner, or Tea Set, and in addition we will immediately send you, all charges paid, a Watch, or 12 Silver-Plated Tea Spoons, 6 Table Knives, 6 Table Forks, 6 Table Spoons, a box of one dozen Stockings (ladies' or gents'), or a pair of ladies' or gents' Kid Gloves. **Remember YOU HAVE ONLY SEVEN BOXES OF BLOOD GLOBULES TO SELL—no more.**

THE ONLY CONDITION. MARK IT WELL.

This is one of the most sensational strokes of advertising ever launched and we will carry it out, as our reputation depends upon the fulfillment of every promise made. In these days of active competition in business enterprises, it is necessary to do something startling to outstrip one's rivals, and that is just what we intend to do. Of course a large amount of cash and nerve are required to enable anyone to take the lead. We have both Nerve and Cash and are ready to give a share of the **CASH TO YOU** in presents. We guarantee satisfaction to all who do business with us.

Address: **BLOOD GLOBULE COMPANY, NEW YORK CITY, N. Y.**

NO MONEY.

Remember you need not pay a **Penny** in advance. Only send your full name and post-office address with nearest Express and Freight Depot. We box, pack, and deliver the Sets **FREE OF ALL EXPENSE** to Express or Freight Depot and we further guarantee against breakage or damage in any form.

WRITE YOUR ORDER ON THIS FORM. CUT IT OUT AND SEND IT TO

BLOOD GLOBULE CO., New York.

Cut from April Chicago REVIEW OF EDUCATION.

PLEASE SEND ME 7 BOXES OF BLOOD GLOBULES, WHICH I WILL SELL AT 25 CENTS A BOX, AND I AGREE TO REMIT THE \$1.75 WHEN SOLD. FORWARD ME THE PRESENTS SELECTED BELOW.

Name.....Town.....State.....

County.....Street and No.....

Express Office.....Freight Office.....

Do you want a Breakfast, { What additional Pre- }
Dinner, or Tea Set? { mium do you want? }

Remember If you do not wish to cut this paper then make a copy of this coupon and send us your written order.



ONLY \$33 FROM CHICAGO

DURING
MARCH AND APRIL, 1902,
VIA
CHICAGO & ALTON RY.

YOU ARE INVITED TO ACCEPT THIS
EXTRAORDINARY TICKET BAR-
GAIN AND THE ADVANTAGES OF
THE CHICAGO & ALTON THROUGH
CALIFORNIA SERVICE. SLEEP-
ING CARS, WITHOUT CHANGE,
CHICAGO TO SALT LAKE CITY,
SAN FRANCISCO, LOS ANGELES,
AND PORTLAND. TWO ROUTES—
"SCENIC" AND "TRUE SOUTHERN."

MR. ROBERT SOMERVILLE, GENERAL AGENT
PASSENGER DEPARTMENT, CHICAGO & ALTON
RAILWAY, 101 ADAMS STREET, CHICAGO, ILL.,
WILL GLADLY ELABORATE UPON THE FOREGOING.
HE DEALS IN THAT DIRECT WAY WHICH IS THE
RESULT OF EXPERIENCE IN ARRANGING TRANS-
CONTINENTAL JOURNEYS.

IF IT IS NOT CALIFORNIA, IT MAY
BE SOME OTHER WESTERN STATE.
TO ALMOST ALL WE HAVE GREATLY
REDUCED RATES AND THROUGH
CARS. DO US THE HONOR TO LET
US FIGURE WITH YOU.

BIRDIES.

A real gem. Teachers fall in love with it
and pupils want to read it through as soon as
they begin it. Appropriate for school and
home.

It is the story of the experience of Delma
and Harold who went to their grandfather's
to spend the summer studying and observing
the birds. Contents are:

BIRDIES AT THEIR TRADES: Mason—Swal-
low, Basketmaker—Crimsonfinch, Weaver—
Oriole, Fuller—Goldfinch, Carpenter—Wood-
pecker, Tailor—Tailorbird.

BIRDIES AND THEIR SONGS: In the Garden
—Robin, in the Wood—Thrush, in the Field—
Bluebird, in the Sky—Lark, in the Home—
Canary, in the Grove—Mockingbird.

BIRDIES ON THE WING: Hummingbird.

THE BIRDIES' FAREWELL: Jack Sparrow
and Jenny Wren, Good-bye.

The book is very prettily illustrated by
Bertha L. Corbett, the artist of Sunbonnet
Babies. The author is Ida S. Elson, of Phila-
delphia, formerly a prominent Kindergarten
of Bethlehem, Pa.

Price: Cloth, 104 pp., 30c.

Special prices for class use.

WM. G. SMITH & CO.,
Minneapolis, Minn.



Big Four ROUTE

TO

INDIANAPOLIS
CINCINNATI
LOUISVILLE
AND ALL POINTS

South and Southeast

THE SCENIC LINE TO

Virginia, Hot Springs, and Wash-
ington, D. C., via Chesapeake
& Ohio Railway

The only line from Chicago connecting in
the Central Union Depot, Cincinnati, with
trains of C. & O., L. & N., Q. & C., and B. & O.
S. W. Ry's.

City Ticket Office: 234 Clark Street
J. C. TUGHER, G. N. A.

\$85.00

is all it will
cost for a trip through

YELLOWSTONE PARK

at the close of the

MINNEAPOLIS CONVENTION.

THE NORTHERN PACIFIC

makes a proposition that you cannot ignore. For
\$85.00 they will sell you a ticket covering railway and
Pullman fares, Dining car meals on train, and hotel
bills and stage coach transportation for the five and
one-half days in the Park. The round trip will re-
quire about nine days from Minneapolis.

If a sufficient number go, a SPECIAL TRAIN of
Pullman and Dining Cars will be placed at your dis-
posal.

Send six cents for "Wonderland 1902," 25 cents for
"Yellowstone National Park," and for any additional
information write to F. H. FOGARTY, Gen. Agt., N. P.
R., 208 So. Clark St., Chicago, or address

CHAS. S. FEE,
G. P. & T. A., N. P. R.,
ST. PAUL, MINN.

Recommended by SUPT. O. T. BRIGHT

A Book for Bird Lovers

BIRDS OF LAKESIDE AND PRAIRIE

By EDWARD B. CLARK.

16 Colored Illustrations

Price \$1.00

In this volume of field sketches the author takes his readers with him to the haunts of the birds in the Middle Western country and together they study the songsters and learn of their ways. Mr. Clark is an authority on birds and is known throughout the entire country for his writings upon the subject of our feathered friends.

Read what the best known Chicago critics say of "Birds of Lakeside and Prairie."

"Edward B. Clark of Chicago has made some exceedingly critical observations on 'Birds of Lakeside and Prairie,' and the same have been embodied in a book published by A. W. Mumford (Chicago-New York) sixteen handsome illustrations in color accompanying the text. Mr. Clark presents the bird life of the lakesides and prairies of the Middle West in a charming way, and invests them with an individuality as strongly marked as Thompson-Seton gives to his wild animals."—*New York World*, Dec. 21, 1901.

"It has been a matter of wonder to many why some bird lover did not do for the Middle West what Burroughs and Torrey have done for New England and the eastern seaboard. A modest beginning has been made in this direction by a little book, 'Birds of Lakeside and Prairie,' written by Edward B. Clark, a local writer. Mr. Clark knows birds and loves them, and it is to be hoped that his little book will meet with such success as will justify him in putting out a more ambitious book in the future."—*Chicago Tribune*.

"Mr. Clark has done for the birds of the Middle Western region much the same service as Bradford Torrey has accomplished for the feathered denizens of eastern woods and meadows. Nor need one hesitate to compare the literary charm of the newer writer with that of the other.

"Mr. Clark's volume will make a bird lover of almost anybody who reads its sparkling pages and studies its sixteen superbly colored illustrations. It tells of ornithological adventures in the Skokie and in various other haunts of birds in the country surrounding Chicago, besides chronicling the results of more distant excursions, notably one in the region of Lost River in Southern Indiana. The peculiar value of the book lies in the absolute originality of its materials, in the humor and sympathy of its spirit and of the author's power of combining the interesting with the scientifically accurate."—*Extract from Edwin L. Shuman's review in Chicago Record-Herald*.

In the course of a review of something more than half a column in length, Colonel J. W. Crawford says in the *Chicago Evening Journal*:

"In 'Birds of Lakeside and Prairie' Mr. Clark has written a charming book. It cannot fail to interest and instruct, not only students of bird nature but the public at large. The subject is one to which little general attention is paid, yet it is one that has peculiar charms. Especially is this true when the text is treated after the manner of the volume in question. Mr. Clark has avoided all technicalities, treating his subject in an easy, delightful running style that takes one immediately into close sympathy with the birds."

John D. Sherman, in the *Chicago Inter Ocean*, says in part:

"Mr. Clark has found an astonishing variety of birds and is a mighty hunter—with the opera glass. He is alone in his work here in the West and has done for our birds what Bradford Torrey and others have accomplished in the East. The narrative of his hunting trips is interesting and has a distinctive literary charm. The book is splendidly illustrated with sixteen full page color photographs."

SPECIAL OFFERS.

Birds of Lakeside and Prairie.....	80 cents
Review of Education, one year.....	\$1.00 } Both
Birds of Lakeside and Prairie.....	1.00 } \$1.60
Birds of Lakeside and Prairie.....	\$1.00 } Both
50 Birds and Nature pictures, 2c. each.....	1.00 } \$1.50

A. W. MUMFORD, PUBLISHER,

203 Michigan Ave., Chicago.

Standard Literature for Schools

A Series of Choice Books for Class Reading and School Libraries.

AMERICAN HISTORY.

		List Price.	
		Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years.	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years.	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse-Show Robinson (Kennedy), No. 10	For 6th and 7th Years.	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years.	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years.	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years.	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years.	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years.	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulwer-Lytton), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years.	.20	.30
Rob Roy (Scott), No. 3	For 6th and 7th Years.	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

FRENCH, SPANISH AND ROMAN HISTORY.

Alhambra (Irving), No. 4	For 6th and 7th Years.	.12½	.20
Last Days of Pompeii (Bulwer-Lytton), No. 38	For 7th Year	.20	.30
Ninety-Three (Hugo), No. 18	For 7th Year	.20	.30
Peasant and Prince (Martineau), No. 41	For 6th and 7th Years.	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (For School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (Moore), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Robinson (Irving), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

Black Beauty (Sewall), No. 31	For 5th and 6th Years.	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years.	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years.	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years.	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years.	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years.	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text	.12½	.20
Evangeline (Longfellow), No. 21	Full Text	.12½	.20
Five Great Authors No. 42	Each Selection Complete..	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems.	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11		.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete..	.20	.30
Silas Marner (Eliot), No. 43	Complete	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete	.20	.30

University Publishing Co., 27 W. 23rd St., New York City.

THE REVUE OF EDUCATION

AN EDUCATIONAL REVIEW OF REVIEWS

(Formerly *The Child-Study Monthly*)

VOL. VII. No. 10.
WHOLE NUMBER 72.

CHICAGO, MAY, 1902.

\$1 PER YEAR.
10 CENTS A COPY.

CONTENTS.

Editorial Comment.....	361
Colonel Francis Wayland Parker, Rev. John L. Spalding	366
Education for Girls, Jeannette Winter Hall.....	369
Child Life as Recorded in History, and Its Place in Kindergarten Training, Nina C. Vanderwalker.....	375
The Teacher's Work, Samuel Hamilton.....	378
The Supervisor's Opportunities, Laura Fisher	380
The Danger of Using Biological Analogies in Reasoning on Educational Subjects, W. T. Harris	383
The Use of Current Events in School Work, Francis B. Atkinson	388
Suggestions for School Decoration, Mary D. Pollard	389
The Philippine Schools, Walter J. Ballard.....	390
Book Reviews	392
Educational Articles in the May Magazines.....	394
Index to Volume VII.....	395

A. W. MUMFORD, Publisher

203 Michigan Avenue

Chicago, Illinois

THE REVIEW OF EDUCATION.

PUBLISHED MONTHLY EXCEPT JULY AND AUGUST.

TERMS AND CONDITIONS OF PUBLICATION.

PRICE.—The subscription price is one dollar a year, payable in advance. Single copy ten cents.

POSTAGE IS PREPAID by the publisher for all subscriptions in the United States, Canada and Mexico. For all other countries in the Postal Union, add 30 cents for postage.

CHANGE OF ADDRESS.—When a change of address is ordered, both the new and the old address must be given. Postmasters are not allowed to forward second-class matter until postage is sent to prepay charges. It costs two cents per copy to forward this magazine. Subscribers who do not observe this rule should not ask us to send duplicate copies.

DISCONTINUANCES.—If a subscriber wishes his magazine discontinued at the expiration of his subscription, notice to that effect should be sent, otherwise it is assumed that a continuance of the subscription is desired.

HOW TO REMIT.—Remittances should be sent by check, draft, express order, or money order, payable to order of A. W. Mumford. Cash should be sent in registered letter.

RECEIPTS.—Remittances are acknowledged by change of label on wrapper, indicating date to which subscription is paid.

AGENTS.—We want an energetic, courteous agent in every town and county. Write for terms and territory.

All letters should be addressed to

A. W. MUMFORD, Publisher,
203 Michigan Ave., Chicago, Ill.

Birds and Nature (Monthly)	\$1.50 per year.
School Bulletin (Monthly)	\$1.00 "
American Primary Teacher (Monthly)	\$1.00 "
Modern Methods (Monthly)	\$1.00 "
Current History (Monthly)	\$1.50 "
N. E. Journal of Education (Weekly)	\$2.50 "
Journal of School Geography (Monthly)	\$1.00 "
Educational Review (Monthly)	\$3.00 "

33½ per cent discount on any or all of these when ordered in combination with "Review of Education." Sent to one or several addresses.

A. W. MUMFORD.

OF BIRDS OF SONG AND STORY, \$1.00.

"Birds of Song and Story" is not quite a fully descriptive title of the book just published by Elizabeth and Joseph Grinnell, since the more interesting parts of it are not the legendary and poetical, but the intimate observations of bird life made by one who has been for years friend, neighbor and host of the birds. Sixteen illustrations in colors add to the beauty of the book.—*Out West.*

May, 1902.

Industrial Pictures.

Size 6 x 9 inches.

At the bottom of each picture is printed a brief description.

LUMBERING SET, TEN CENTS

Lumber Camp	A Log Jam
Sawing Trees	Log Thawing Pond
Hauling Logs	A Lumber Plant
Steam Log Loader	A Typical Lumber Yard
Railway Logging in a Forest	Receiving Docks
Before the Drive	Home Interior

A. W. MUMFORD, Publisher,

203 Michigan Ave.

Chicago, Ill.

Of all the sample magazines on birds that I have had sent to me this month I find yours the most interesting, and I herewith enclose \$1.50 for one year's subscription.

W. M. LAMKIN.

Boston, Mass., April 29, '02.

—:O:—

Enclosed please find \$5.88, for which please send me the 488 BIRDS AND NATURE pictures and a complete set of the Typical Forest Trees in Photogravure. Permit me to say that I believe BIRDS AND NATURE is the best magazine of its kind published. It fills a long-felt want in the work of my department and is also a valuable addition to my library.

S. M. SMITH,

Dept. Nat. Science.

Elon, College, N. C., April 10, '02.

—:O:—

Enclosed please find my bill for which please send me the 504 BIRDS AND NATURE pictures and the magazine one year.

WM. S. OPDYKE.

Elon, N. C., May 8, '02.

OF BIRDS OF LAKESIDE AND PRAIRIE, \$1.00.

Of making many bird-books there is nowadays no end; but if all were as delightful as this one, I should say "Increase and multiply." It makes one long for Tower Hill, for these are the very same blue jays and warblers we know so well in Wisconsin, though also to be studied in Chicago parks by enthusiastic observers like Mr. Clark.

Here they are in their habits (and colors), as they live, and the letterpress of the book is as engaging and homey as the pictures.

What an astonishing art is this new one that reproduces every tint and even the exquisite texture of plumage on these, "our little brothers of the air," as dear St. Francis of Assisi calls them. And this is done for the pleasure of the multitude at a trifling charge, whereas the Audubon set, far less accurately colored, cost \$1,000 complete, when I was a child, and was shrined in costly stands for the enjoyment of the few. Now a dollar or two buys an exact reproduction of the darlings in all their gay or tender or saucy unconsciousness as they flit from tree to tree or sit on nest or bough.

Mr. Clark has stalked the birds without a gun for many years, and to no one person do we of Chicago owe more for persistent efforts to have good laws framed and carried out by which to protect these woodland wards of ours. But outside of any benevolent object, the stories are delightful and the author's intimate acquaintance with individual grosbeaks, dickcissels and other feathered ladies and gentlemen he has known, make his adventures in wood and field read like a novel, while the subject will be found, I fancy, far fresher to most of us than the stock pabulum of a modern romance.

Get such books as "Birds of Lakeside and Prairie" and go early to the country, or before sunrise to our parks, if you want to have a good time!
C. S. K.

April 3-'02, Unity.

A. W. MUMFORD, Publisher,

203 Michigan Ave., Chicago.

NOTABLE NEW BOOKS

BIRDS OF LAKESIDE AND PRAIRIE. By Edward B. Clark. With 16 illustrations in color. Price, \$1.00.

This book contains sketches of bird-life in the great middle west by one of the country's closest students of nature. The author takes his readers afield with him and puts them in close touch with the birds of lakeside, woodland and prairie.

"Mr. Clark has found an astonishing variety of birds and is a mighty hunter—with the opera glass."—*Chicago Inter-Ocean*.

THE JINGLE BOOK OF BIRDS. By Edward B. Clark. 16 Colored plates. Price, 60 cents.

This book is both for the children and the elders. The lines are not jingles merely, but jingles which have a well-rounded purpose and much of pith and point. The color scheme of the cover is strikingly beautiful.

"The 'Jingle Book of Birds' is a very pretty possession."—*Chicago Evening Journal*.

A B C BOOK OF BIRDS. For children large or small. By Mary Catherine Judd,

With nonsense rhymes for little ones and prose sense for older ones. 26 Colored plates. Price, \$1.00. Miss Judd, in this has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds.

"No better child's book can be found."—*Chicago Record-Herald*.

BIRDS OF SONG AND STORY. By Elizabeth and Joseph Grinnell. 16 colored plates. Price, \$1.00.

These authors are well known as lovers of birds and as interesting writers on bird life. They not only have made the feathered kingdom a subject of out-door study for many years, but they have been explorers in the great field of general literature for the purpose of finding all that it holds pertaining to our bird friends.

"The book, from beginning to end, can be read with pleasure and profit by old and young alike. It is a fascinating piece of natural history."—*Pasadena Daily News*.

BEAUTIFUL BIRD CALENDAR FOR 1902.

This is the most strikingly beautiful calendar ever placed before the public. It is done in red and gray upon the most expensive paper. Upon each of the six sheets is a large picture of a bird in its natural colors. The bird in each instance is characteristic of the month with which it is given. Order now. Price, 50 cents.

"This is an exquisite bit of color work."—*N. E. Journal of Education*.

BIRDS AND NATURE. Vol. XI. Edited by William Kerr Higley. Octavo, pp. 232, 40 full-page illustrations by color photography. Price, cloth, \$1.50.

A. W. MUMFORD, Publish

203 Michigan Ave., Chicago

— \$4.10 FOR \$2.00 —

A Combination Offer That Means Something.

BIRDS AND NATURE (one year).....	\$1.50
REVIEW OF EDUCATION (one year).....	1.00
GAME OF BIRDS.....	.35
GOLDEN PHEASANT (Colored Picture).....	.25
LITERATURE GAME.....	.25
GAME OF INDUSTRIES.....	.25
TWENTY-FIVE PICTURES (From Birds and Nature).....	.50

ALL FOR ONLY

\$2.00

The total amount of value\$4.10

BIRDS AND NATURE——Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by color photography. It is the only periodical in the world which publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.
"Certainly no periodical, and probably no book, on birds ever found anything like such favor with the public as BIRDS AND NATURE."—Evening Post, New York.

REVIEW OF EDUCATION——An educational review of reviews.

GAME OF BIRDS——Illustrations of popular birds, in colors true to nature, on 52 finely enameled cards 2½x3½ inches. Enclosed in case with full directions for playing. A beautiful and fascinating game.

GOLDEN PHEASANT——A beautiful Picture for framing. Printed in natural colors on fine paper 18x24 inches.

LITERATURE GAME——500 Questions and Answers in English Literature. 100 cards, 2½x3 inches. Interesting and instructive.

GAME OF INDUSTRIES——Educational—400 Questions and Answers on the great industries of our country. 100 cards, 2½x3 inches.

REMEMBER——A year's subscription to BIRDS AND NATURE and REVIEW OF EDUCATION alone amount to \$2.50. If you now take either magazine, or both, your subscription will be advanced one year.

A sample of both magazines for a dime and two pennies—12 cents in stamps. Send for Catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

— \$4.20 FOR \$2.10 —

Another Combination Offer that Means Something.

BIRDS AND NATURE one year	\$1.50
*Ten Back Numbers BIRDS AND NATURE	1.50
60 Colored Pictures from BIRDS AND NATURE.....	1.20

The total amount of value.....\$4.20

**ALL FOR
\$2.10**

BIRDS AND NATURE, Monthly; 48 pages, 8x10 inches; per year, \$1.50. A magazine devoted to nature, and illustrated by colored photography. It is the only periodical in the world that publishes pictures of birds, animals, insects, flowers, plants, etc., in natural colors. Eight full-page plates each month.

✓ "It is one of the most beautiful and interesting publications yet attempted in this direction. It has other attractions in addition to its beauty, and must win its way to popular favor. I wish the handsome little magazine abundant prosperity."—*Chas. R. Skinner, State Supt., Albany, N. Y.*

"You have certainly hit upon a method of reproducing natural colors with remarkable fidelity to nature."—*Dr. Elliott Coues.*

"Your magazine has certainly had a phenomenal success, and it is entirely worthy of its cordial reception."—*J. A. Allen, Editor "The Auk."*

"Most of the pictures are astonishingly good. I like them so well that I shall put them up on the walls of my rustic retreat."—*Slab Slides.*—*John Burroughs.*

"When one considers the low price at which you sell BIRDS, the number and excellence of the plates are surprising, and I trust that your efforts to popularize the study of ornithology, may meet with the success it so well deserves."—*F. M. Chapman, Associate Editor "The Auk."*

*A bound volume of BIRDS AND NATURE may be substituted for the ten back numbers.

A sample of this magazine and of The Review of Education for a dime and two pennies—12 cents in stamps. Send for catalogue.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

BEST OF ALL EDUCATIONAL PUBLICATIONS

The Educational Gazette

A High Class and Popular Magazine

for the School and the Home. Now

in its 18th year. Stands in the first

rank of successful magazines. Its

large circulation constantly increasing

A liberal amount of space is devoted each month to late Uniform or Kindergarten Examinations, questions and answers, and to the latest School Text Books. It is clean and wholesome in its contents as in its appearance, and is handsomely illustrated.

Not confined strictly to the technical side of education—with just enough “breadth” to its contents to make it invaluable to the home—and sufficiently scientific and general to be indispensable to the library—*The Educational Gazette* should find its way every month into every home, library and school in the country.

A Few Sample Articles Published in Past Numbers of THE EDUCATIONAL GAZETTE

Parent and Teacher, By Agnes Dean Cameron, Victoria, B. C.

Mathematics: The Arbitrary Value Check, By David Eugene Smith.

Child Study: Hidden Forces in Life and Education, By M. V. O'Shea, University of Wisconsin.

In the Kindergarten, By Sadie Pierpont Barnard, Rochester, N. Y.

Nature Study in Elementary Schools, By John D. Wilson, Syracuse, N. Y.

Vertical Writing, By J. F. Barnhart, Akron, O.

Individual Instruction, By Prof. John Kennedy, Batavia, N. Y.

Manual Training, By John J. Quinn, Warren, Pa.

Practical Drawing, By Frank Favour, Artist.

Rational Gymnastics for Public Schools, By Dr. Wm. Sparstrom, Instructor Boston School of Gymnastics.

Arts of Expression, By C. B. Gilbert, Superintendent of Public Schools, Rochester, N. Y.

Character in Speech, By Miss Bella Smith Bruce, Yonkers, N. Y.

One Dollar a Year

Single Copies 15c

SEND FOR SAMPLE COPY

Educational Gazette Publishing Company

ROCHESTER, N. Y.

New York Office: St. James Building
Broadway and 26th St.

ERNEST HART,
Manager

TO BE ISSUED THIS SPRING.

THE TREE BOOK

By JULIA E. ROGERS, of Cornell University.

12mo. About 350 Pages. Price, \$2.00. Advance Order, \$1.00.

This valuable contribution to the popular literature of forestry will be illustrated with the instructive and beautiful pictures from our twenty-five Typical Forest Trees in Photogravure. These show the tree as it appears in nature; a view showing the characteristics of the bark and a view of the leaf. In addition there will be 148 drawings and other text illustrations.

This will be one of the most practical books ever published. It will be complete in itself, containing no technical terms that are not defined. It will not have to be used with some other publication to make the text intelligible. The members of Forestry Clubs and all interested in trees will find it a handy companion at all times.

A. W. MUMFORD, Publisher, 203 Michigan Avenue, Chicago.

Beautiful Bird Calendar → FOR 1902 ←

This is the most strikingly beautiful Calendar ever placed before the public. It is ten and a half by twelve and a half inches, and is done in red and gray upon the most expensive paper. Upon each of the six sheets appears a large picture of a bird in its natural colors. The bird in each instance is characteristic of the months of the year with which it is given. Upon the reverse of each page is a description of the birds and their habits, written by Edward B. Clark. No more beautiful and useful holiday gift can be found. Order now for yourself and your friends.

This is an exquisite bit of color work. Each of the six pages of the calendar (9½x12½) has upon one side a beautiful picture of some bird—the owl, bluebird, warbler, red-headed woodpecker, passenger pigeon and blue jay—while on the reverse side is a full, authentic, interesting description of the bird. Each bird is not only colored to life, but the pose and surroundings are equally true to life.—*Journal of Education*.

WE WILL SEND ONE OF THESE CALENDARS FREE TO ANYONE SENDING US ONE
SUBSCRIPTION TO "REVIEW OF EDUCATION" WITH \$1.00

PRICE 50 CENTS

A. W. MUMFORD, Publisher, 203 Michigan Ave., Chicago

I enclose draft for \$350.00 in payment of the BIRDS AND NATURE covers furnished by you for our Arbor Day Annual. I feel sure that we have given the study of birds and animals and all nature some impetus in distributing our Annual for this year. I have received many letters of commendation from all parts of the State and country.

CHARLES R. SKINNER.

State Superintendent of Public Instruction.

Albany, N. Y., April 16, 1902.

CONSTRUCTION WORK.

Its Relation to Number, Literature, History and Nature Work.

By EDWARD F. WORST, Prin. Ohio Street School, Austin, Ill.

This little volume contains one hundred and twenty models for construction work in bristol board, manila paper and mimeograph paper, with definite, dictated steps for making each one. They are planned originally for work in the primary grades. Among the articles made we find baskets and boxes of various kinds, furniture, trays, postage stamp holders, thread winder, pencil holder, comb case, cradle, candlestick, Puritan hat, Eskimo's sled, bill holder, card receiver, wind mill and King Alfred's lantern, etc., etc. Many of the forms are familiar to kindergartners through their work in card-board modeling. Primary teachers will doubtless find it very useful. The exercises given in the book afford one means of manual training developing accuracy, familiarity of terms, opportunity for measurement, etc.

125 illustrations. 108 pp., 5½x8½ in. 75 cents.

A. W. MUMFORD, Publisher, - 203 Michigan Ave., Chicago.

JEAN MITCHELL'S SCHOOL

BY ANGELINA WRAY

Supt. L. H. Jones, of the Cleveland, O., public schools, writes:

"I have read and re-read Jean Mitchell's School. The book is a worthy contribution to the school thought and practice of our time. It is concrete pedagogy with life in it. I wish all the teachers in the country, from the first primary grade to the presidents of the great universities, might read it and have its kindly, helpful spirit breathed into them.

JEAN MITCHELL'S SCHOOL is superior beyond all comparison as a story of the *School*. Miss Wray has given us in Jean Mitchell, the teacher pure and simple in the midst of her wonderful work. The drama here unfolded is that belonging to this fundamental institution—the school. The teacher is a real heroine, winning, one by one, the lawless and the churlish among her pupils to a spirit of loving obedience and mutual regard and good fellowship.

This volume of 244 pages shows the growth of the "Ideal School" from month to month throughout the year. It is beautifully illustrated with drawings from nature studies appropriate to each month of the school year, and with half-tone pictures of the dramatic scenes. Elegantly bound in cloth. Price, \$1.25 a year.

Ask for our catalogues of Books for Children for
Supplementary Reading and of Books for Teachers.

SCHOOL AND HOME EDUCATION, Geo. P. Brown, Editor, is the foremost journal of the country for the thinking teacher. \$1.25.

— ADDRESS —

The Public School Publishing Company

BLOOMINGTON, ILLINOIS

Greatest of all Tonics

Horsford's Acid Phosphate

It removes Mental Depression, Intense Weariness
and loss of Nerve Power—

Invigorates the Entire System.

Marthas Vineyard

SUMMER INSTITUTE

Cottage City, Mass.

500 STUDENTS 40 INSTRUCTORS

24th year, begins July 8. Out in the Atlantic Ocean.
Send for 64-page circular.

WILLIAM A. MOWEY, Hyde Park, Mass.

SEPTEMBER VACANCIES We have direct calls from public, private, secondary, technical and Normal Schools, and colleges, for more than 1200 teachers and professors. New vacancies daily coming in. More good candidates needed. Seventeenth Year Book of 80 pages free. C. J. ALBERT, Manager, The Albert Teachers' Agency, Fine Arts Bldg., Chicago.

I enclose check for \$5.00 for which please send me the five volumes of BIRDS AND NATURE referred to in your offer. The books will go to the Stafford Library where the other six volumes now are, and are well used, too.

Stafford Springs, Conn., April 30, 1902.

ALVARADO HOWARD.

"Of all things that a teacher should know how to do" says G. Stanley Hall, of Clark University, "the most important, without any exception, is to be able to tell a story."

The Young Idea tells the story of Travel, Character, Observations in Nature and the Questions of the Hour.

Buy Your Brown Pictures

With The Young Idea ✂ ✂

1. We will send 100 of the miniatures for illustrating language work with **The Young Idea** a year for 60 cents (select from catalogue).

2. We will send 50 of size 5½x8 and **The Young Idea** a year for 60 cents.

3. We will send 17 of the Platinoprints or the Carbonprints size 7x9 and **The Young Idea** a year at 60 cents. These last pictures are most beautiful.

Send Orders to

JAMES E. HUGHES,

4 Ashburton Place, BOSTON, MASS.

Mrs. C. will take the offer of XXX numbers of BIRDS AND NATURE and 100 pictures, for which I enclose Money Order for \$5.25, enclosing 25 cents for postage.

MARY C. KNEELAND.

East Jaffrey, N. H., April 12, 1902.

Enclosed please find a P. O. Order for \$1.75 in payment for one year's subscription to BIRDS AND NATURE and to the REVIEW OF EDUCATION, as advertised in the March number of the REVIEW OF EDUCATION. I am much pleased with both papers.

MOLLIE WILSON.

Wellington, Kan., April 7, 1902.

Everyone admires the editor's management of the beautiful magazine, BIRDS AND NATURE.

ELIZA WOODWORTH.

Washington, D. C., April 30, 1902.

Enclosed find Chicago draft for \$....., for which please send me the five double volumes, half morocco, of BIRDS AND NATURE.

O. H. CARMICHAEL.

Tuscola, Ill., May 7, 1902.

The Review of Education.

VOL. VII.

CHICAGO, MAY, 1902.

NO. 10.

EDITORIAL COMMENT.

In his address at the Colonel Parker Memorial, held in Chicago April 19, 1902, Dr. Emil G. Hirsch spoke of enthusiasm as a dominant element in Dr. Parker's character. Continuing, he said:

The teacher, above all other qualifications for his responsibilities, must have enthusiasm and sympathy. Ours is a day that somehow undervalues the function of the enthusiast. Enthusiasm is the expression of a strong sense of individual responsibility and power, under the passionate impulse for self-assertion, in the service of vital ideas. It is the protest of an open and impatient mind against the omnipotence of precedent. It is the irresistible yearning for nobler things to be done tomorrow, but as yet not done in the hour which is. The future is the solicitude of the enthusiast, not the past. Freedom, not conformity, is his objective point. Under the dominion of a philosophy which has reduced man to a mere automaton and regards him as an impersonal instrument of mechanical combinations of forces, our day has been robbed of the power to understand the potency of enthusiasm. The slave, so runs the argument, may tug at the chain, but he cannot break it. Man is the slave of circumstance and the event of precedent accidents. He is one little globule in a mighty wave. He must rise with the mass and sink again with its recedent volume. The cadence of his own life can be none other than that of the blind ocean of which he is so tiny a part.

The Rev. Dr. Edward Everett Hale is the official preacher at the University of Chicago for the month of May. Dr. Hale has been the pastor of the South Congregational (Unitarian) church of Boston for nearly one-half a century. This noted divine and writer considers the present enthusiastic movement for the education of the colored race, as well as the white people of the South, the greatest event of current times. Interviewed by the *Chicago Record-Herald*, he said:

We hear a great deal about the beef trust and the sugar question, but the general movement for education in the South is, I believe the most significant thing today. Last week a great convention for the consideration of the southern educational question was held in Atlanta. I do not suppose that its importance was fully appreciated, and the papers have not given it a great deal of attention.

Education such as we have in the North is the thing that will save this republic. And that is what they are learning in the South. They must get over the idea that their society is to exist of a few gentlemen who are grandees. All of the people, black as well as white, must have education. By education, as I take it, we do not or should not mean special training in one kind of technical work, but the broad knowledge that comes from reading. Every man should be educated, so that he can have intelligent ideas on all the questions which come up. I believe there is too much and too early specialization.

Mr. Andrew Carnegie recently addressed the graduating class of the school department of the General Society of Mechanics and Tradesmen in New York city. Mr. Carnegie gave some excellent advice and made many statements that should be carefully considered by all students. The following are a few of the pointed paragraphs contained in his speech:

There are several classes of young men. There are those who do not do their duty, and there are those who profess to do their duty, and there is a third class, far better than the other two, that do their duty and a little more.

There is a difference between talent and genius. Talent does what it can; genius, what it must. But it is the little more that makes the difference. There are many great pianists, but Paderewski is at the head because he does a little more than the others.

The youth who spends his night after his daily toil in improving himself is the one that succeeds.

Now, what do these graduates seek? I suppose some of them want to be millionaires. Well, that is a laudable ambition. Others, I suppose, are looking for fame. That is a vainer ambition with more of the spirit of a Hotspur.

But the man who works for money alone will not find happiness, nor will he be a useful citizen. Money never buys satisfaction or happiness, but it does bring many disappointments and creates many jealousies.

I believe it to be the duty of every young man to acquire a competence. But, having secured that, his aim should not be to obtain additional wealth or fame, but to endeavor to see of what use he can be to his fellow beings. If he will do this his reward will be ample.

The prevention of crime can be greatly facilitated by the education of the rising generation. A large percentage of the children in our larger cities are those of poor parents who neglect their children either willfully or because of necessity. These boys and girls find their entertainment on the streets where they come in contact with influences that tend to develop the opposite of high ideals of living. Parental schools under the direction of wise teachers will do much to remedy this evil of our country and cause many of these interesting children to become useful citizens. Our wealthy business men who are giving so liberally to the higher educational institutions and

to libraries are doing much to better mankind, but these gifts do not reach the dependent classes. Gifts that will assist in the education of these classes are among the worthiest of benefactions. Judge Richard S. Tuthill, of the Juvenile Court in Chicago, declares that **women** are the real benefactors of homeless children. He says:

Men in their struggle for the almighty dollar do not interest themselves in this work for any length of time. Their interest and enthusiasm endures for a short time.

I feel certain that the interest of the Chicago women in these children will never die. Women started the teaching in the jail, built the John Worthy School, amended the state law so that parental schools could be established and enacted the juvenile law.

At present we do not have any ideal parental school for these delinquent children, but we will have. We have already in sight over \$150,000, and I feel certain that we will get a million. Try to help those who cannot help themselves. With the women interested in the work the battle is half won.

The importance of dignity of speech and the use of choice words by an orator, who wishes to emphasize an argument, cannot be overestimated. Humorous language may amuse but it will not convince the thinking mind. This is true not only in the halls of Congress, but also in all assemblies and in the classroom. Brilliant and witty clauses are rarely the ones that win in arguments of deep moment. The orator known for his wit holds his audiences because he amuses them. They expect to be amused whenever he speaks. If, however, he drops his humorous strain and becomes serious his words will no longer hold the attention of his hearers. His words may be true and to the point but something different is expected from his lips. He is known only as a witty entertainer. It has been said that "the halls of legislation are strewn with the wrecks of men who gained a momentary prestige and fame by their wit and humor and then sank back into oblivion to be remembered no more forever." *The Baltimore American* very truthfully says:

The man who becomes noted as a statesman is not the one who elucidates his argument by means of sarcasm, satire and wit; but the one who deals in rounded periods,

flowing eloquence and ringing phrases. Patrick Henry, Henry Clay, Daniel Webster, John C. Calhoun, and the other giants of the old days never yielded to the temptation to be funny.

It is one of the most important functions of the university, and of the more elementary schools, to teach the principles that underlie true oratory. These are useful in all the walks of life and essential to the highest ideal of citizenship.

Recent articles in educational magazines and journals point to the fact that a strong co-operative movement is being inaugurated by which the museums of natural history will be made more useful to the public schools. This seems to have been brought about through several agencies, chief among which has been the teacher's desire for a broader knowledge of nature study and the museum curator's realization that the museum, to be popular with all classes of people, must be something more than a mere repository for natural history collections. Teachers, as a rule, are not acquainted with the methods of starting or caring for a museum. Neither have they the time to devote to the accumulation, the identification, or even the selection of such material as may be needed in illustrative teaching. Lacking these qualifications teachers naturally turn to the public museums for aid. It is a gratifying fact that this aid is not sought in vain, for curators have shown themselves willing to assist all in every way. In many museums teachers are encouraged to bring their classes and the collections are arranged with instructive labels so that they may be consulted easily and with economy of time. It is the duty of the curator to carefully investigate the requirements of nature study and make his installations broad and comprehensive, covering as fully as possible the principles of the science illustrated. Teachers on their part must study to know just how much of each collection can be used advantageously.

Among those museums that are embracing this opportunity to assist in the

work of the public schools are the Field Columbian Museum and the Academy of Sciences in Chicago; the Museum of Comparative Zoology, Cambridge, Mass.; the Buffalo Society of Natural Sciences; the Brooklyn Institute, and the American Museum of Natural History, New York; the Carnegie Museum, Pittsburg, Pa., and the National Museum at Washington.

These institutions are aiding teachers by the exhibit of specimens arranged in such a manner as to fully illustrate the relation existing between one natural object and another, and also their relation to their environment and to man. Animals are arranged in natural groups that well illustrate their habits. Brief and accurate information is given on carefully printed labels. In some museums popular lectures, covering a wide range of subjects, are especially prepared, and delivered at regular intervals, to supplement the museum exhibits. Some museums furnish loan collections and freely give, from their store of duplicates, specimens for use in the public school classrooms. It is to be hoped that this important work will continue to grow and broaden, until every city has a local museum working with the public schools for the better education of masses.

Interest in the preservation and development of forests in the United States is becoming more and more widespread. The forestry schools at Yale, Cornell and Biltmore have done much to deepen this interest. Gifford Pinchot, chief of the bureau of forestry, of the United States, has made a most thorough study of forestry in relation to land problems in the West. In a recent lecture before the students of the Yale Forest School, he said:

Every acre of the public domain which is not able to produce agricultural crops should be made into forest reserves. It is of little importance whether these lands contain timber or not. If they are not fit for agriculture they should be put to use and not allowed to lie waste. They are important for the reason that all of them, or nearly all, can,

if handled properly, produce timber crops. The government in its forestry work in the west is planning for the future, and with this idea it has come to realize that land entirely destitute of tree growth is often just as valuable, and can just as properly be made into forest reserves as well timbered areas. We have the sand hills of Nebraska, for instance. A forest reserve of these barren hills is almost sure to be declared within the present session of congress, and as soon as it is declared the bureau will begin the task of growing forests for the benefit of the rich agricultural land surrounding. This same policy, this same idea, will prevail in the immediate reservation of other arid or semi-arid lands in the west.

It seems almost impossible that an institution of such magnitude and so far-reaching in its influence as is the University of Chicago should have had but a little over ten years of corporate existence. It is eminently fitting that a decennial of such moment should be appropriately celebrated. For this purpose the authorities of the university have wisely chosen a series of publications which will have a world-wide usefulness.

The University Press announces for immediate publication the first of the decennial publications of the university, which have been planned in connection with the celebration of the completion of the first ten years of the corporate existence of the institution. In general, the series will set forth and exemplify the material and intellectual growth of the university during its first decade, and will consist of ten volumes, which are now in an advanced stage of preparation. The first two volumes will contain the president's report to the board of trustees on matters of administration. The last eight volumes will consist of separate articles by representative members of the faculty, containing the results of original research in many fields. The lines of study represented in general will be philosophy and education, the political and social sciences, history, the languages and literatures of the Old and New Testaments, Theology and church history, the classical languages and archæology, Sanskrit and comparative philology, the romance and Germanic languages, English, mathematics, astronomy and astrophysics, and the physical and biological sciences. The various articles of the volumes will be issued and circulated in separate form, and will constitute valuable contributions to science. The volumes will be issued in quarto form.

The University of Chicago announces the following list of persons who will serve as university preachers during the coming summer quarter: Prof. Henry C. King, Oberlin College; the Rt. Rev. John L. Spalding, Bishop of Peoria; Bishop Charles P. Galloway, Jackson, Miss.; Chancellor Andrews, University of Nebraska; Prof. Stevens, of Yale; President Barrows, of Oberlin; the Rev. W. C. Bitting, New York city, and Bishop John H. Vincent, Zurich, Switzerland.

The annual convocation of the University of the State of New York will be held June 30 and July 1. President Nicholas Murray Butler, of Columbia University, will deliver an address on "Fundamental Principles of Education in the United States." Among the other speakers will be President J. G. Schurman, of Cornell University, whose subject will be "The Elective System and Its Limitation." Dr. George E. Vincent, of the University of Chicago, will also deliver an address.

Some of the Mother's clubs of the city of Chicago have issued an appeal to the Board of Education protesting against the discontinuance of the kindergartens. The decision of the board to close these branches for a time was caused by an apparent lack of funds. This strong appeal contains the following very truthful paragraph:

The primary object of the kindergarten is to teach the child self-government and independent thought at its most impressionable period. This is the fundamental and essential principle of good citizenship. What fills our reformatories and penitentiaries today, and makes the costly parental school a necessity, but the lack of this same self-control.

The secret of language is the secret of sympathy, and its full charm is possible to the gentle.—*Ruskin*.

The geography teacher of the present must be something more than a student of books and maps. He must have a knowledge of a country from actual contact with its natural features and industries. Miss Zonia Baker, of the School of Education of the University of Chicago and a well-known exponent of the modern methods of teaching this subject, who has traveled extensively in foreign countries, is now touring Cuba seeking information regarding ecological conditions in the tropics.

True education has for its aim the preparation for a life of comfort in every walk of life. It is to furnish our youth with culture of mind and heart that will make them noble men and women, and with the necessary skill of hand that will make their home a place of refinement and health, and the shop a place of intelligent and remunerative industry. It is to make all modes of cultivated life honorable.—*Dr. D. L. Kiehle.*

It is but doing deserved justice to our normal schools to state that their fortunes are being directed by the best educational talent of today. In no other department of educational enterprise is there a keener search after truth, or a more determined effort in the line of substantial improvement.—*W. H. Payne.*

Dr. Augustus F. Nightingale, for many years a notable member of the teaching force of Chicago, has been elected to the presidency of the board of trustees of the State University of Illinois. Dr. Nightingale brings to the office a wide experience as an educator which will be of great value in administering the affairs of the university.

The child of five years who enters the grades without having had the advantages of the kindergarten drill is seriously handicapped. He is a poor little unskilled laborer thrown into unequal competition with one who knows his tools and how to use them.—*Superintendent C. E. Tilton.*

Captain George P. Ahern, U. S. A., who is in charge of the forestry bureau at Manila, has compiled a work on the important woods of the Philippines. There are more than 600 tree species on the islands.—*Journal of Geography.*

Dr. William T. Harris will deliver several lectures on the "Psychology of Education" at the Summer Institute to be held at Martha's Vineyard, beginning July 14.

Facts are the eyes through which we see laws. There is no better founded pedagogical rule than that facts must be known before generalizations can be.—*Francis W. Parker.*

If idleness does not produce vice or malevolence, it commonly produces melancholy.—*Sydney Smith.*

The worth of a state, in the long run, is the worth of the individuals composing it.—*J. S. Mill.*

COLONEL FRANCIS WAYLAND PARKER.*

The highest social functions are performed not by conquerors or rulers or legislators or the providers of the necessities, comforts and luxuries of physical life, but by teachers, whether they be mothers, priests, poets, discoverers, inventors or schoolmasters, and that which is indispensable and of paramount importance in the teacher is not so much knowledge as character, since the great purpose and end of education is to form character, and this can be rightly done only by men and women in whom there is a hunger and thirst for human excellence. Others deal with the things that concern life, the teacher with life itself which it is his business to foster, develop and produce in higher and higher potency.

Character is a persistent pursuit of what one believes in, admires, loves and feels himself able to accomplish. If this is material, he is a matter-of-fact man, having the significance and worth of a machine; if it is spiritual, he lives in a world of thought and freedom where all things are possible. One may be drawn to what is useful and pleasant or he may be over-mastered by a passion for what is true and right and so be empowered to neglect or scorn what is merely useful and pleasant. He whose ideal is use and pleasure belongs to the unreasoning crowd; he for whom truth and justice and love are the only sufficient ends of life belongs to the few, whose faith and example become light and strength for the purest and the best. If his country be made a desert; if his people be overwhelmed and scattered he shall abide; for what he believed in and lived by is eternal.

This is the spirit of all genuine teachers. They believe in the good of life and in the surpassing power of right education. Their one aim is to uplift, strengthen and enlighten men; to enable them to know and love the vital truth which gives the inner freedom that makes man the noblest and most

blessed of God's creatures. That one should be poor, should be unrecognized, should have to toil that he may live, is not in their eyes a thing to be dreaded. For them the infinite evil is to be ignorant, is to be base, is to be the slave, not of a tyrant, but of instinct and passion, of lust and hate and greed. Poor men have been heroes acclaimed of all the world. Men who have walked and died in obscurity have risen to shine forever like fixed stars. The divinest being who has appeared in human form toiled that he might live. But the victims of ignorance, of greed, of hate, and dishonesty, though they be kings, though a nation's wealth be heaped about them, are interesting only as a contrast to what constitutes the worth and dignity of man. They are but weeds that prove the soil's fertility. Though the people dream and think and talk of trade and commerce and wages, though they place but a money value on genius, virtue and beauty, though they consider as naught what cannot be weighed or counted, the God-appointed teacher with ever growing insight, sees that the real things whereby man's soul is nourished can neither be weighed nor counted. He is a lover of human perfection, intellectual, moral and physical. He would give his life to make men wiser and more virtuous. He feels that all values are educational values—means whereby life is sustained, enlarged and purified; that life itself is enrooted in God and draws from him its substance, its energy, its beauty and goodness.

No genuine teacher has ever been inspired or guided by mechanical ideals. His genius and power spring not from the arithmetical or logical faculty, but from his capacity for infinite faith, hope and love, of which are born infinite patience and painstaking. It is his sympathy with all that is human that gives him the insight which imparts the skill

*Memorial address delivered by the Rev. John L. Spalding at the Auditorium, Chicago, April 19, 1902.

to develop what in man is best. Above all is he attracted to little children whom God sends into his world to awaken sympathy, love and devotion; whom he showers like blossoms in spring, to teach us to hope and labor for ever diviner harvests. His spirit is rather that of a generous and dauntless youth than that of a calculating man. There is in him something of Plato and vastly more of Christ. He is an idealist and reveals the soul to itself. His pure eye reflects the azure heavens; the flowers spring from beneath his feet; he is free, tranquil and joyous, at home in his Father's house, though he be beset by enemies and have not where to lay his head. No difficulties affright, no obstacles deter him. He is certain that the work he does is the noblest task which can be set for man. He therefore does it with all his heart and finds sufficient reward in the doing.

Such a man and such a teacher was Colonel Parker. He was not a man of rich and varied learning, not an original thinker, not a logical reasoner, not a master of style; but he was one whose faith in the power and value of education was deep and living. Such a faith, springing as it does from genuine interest in human perfection, begets an abiding enthusiasm which leaps from soul to soul. He who is thus inspired is not indifferent to anything that concerns the welfare of his fellows. He stops not to argue; he hears not those who suggest doubts and misgivings; he asks not whether there be danger of failure. An inner impulse urges him on; he will do what he can, come what may. His presence breathes courage, confidence and gladness. His pupils feel that they are able to do what he demands of them, and so they become able. His voice is like the shout of captains when they lead to victory. His eye awakens and fixes attention; his whole manner stimulates and sustains the desire to improve. Where he is there is little question of rules, for he is himself a law for all, putting forth the highest educational force which is the influence of a genuine personality on persons. When, a quarter of a century ago, Colonel Parker was put in charge of the schools of Quincy, they were

quickly transformed as the spring rain and the sunshine transform the naked earth. A new spirit breathed and new life sprang forth; and it was not long before teachers all over the country began to lift their eyes to this dawn which had broken with promise of a fairer day. Here was one who trusted in man's creative soul more than in mechanism and methods and routine and drudgery. Here was a bringer of hope and joy to the teachers who were wandering neglected and unilluminated mid arid wastes. They began to look to him as to the leader for whose coming they had yearned.

What he brought them was not a new and original theory of education and pedagogy. It was a new spirit which was to interfuse itself with their work, and little by little to transform the whole process of teaching. The school room became more like a home where there is a loving association of all the members; where life is free and joyful; where work is pleasant and invigorating; where the tiresome routine of text book and recitation is relieved by drawing, modeling and music; where the pupils are gently led on to express their own thoughts in their own words and not passages learned by rote. Obedience, confidence, courtesy and respect were made easy; individuality was developed; the duller pupils were encouraged and assisted, while self-consciousness and conceit were repressed in the brighter. The yoke of slavish conformity to rules was lifted from the neck of the teachers, who were accustomed to study the peculiarities of each child and to fit the means to the end while they themselves were made to feel that the essential and decisive thing in a teacher is not learning, but ability to teach. In the examinations the test was skill, power to think and do, and not merely knowledge.

The teacher is the school, and it was to the forming of teachers that all Colonel Parker's efforts were directed. He believed that the most important social function is performed by the educator; and he held consequently that the best work one can do for society is to raise to highest efficiency the men and women whose vocation is to inspire, instruct, counsel and guide their fellows, not in

the things which concern their temporal affairs chiefly, but in whatever pertains to wisdom, conduct and character. The good is all that ministers to spiritual life, to intellectual strength, to moral freedom, to righteousness, and they who follow the teacher's calling should feel that their task is God-given, that their work is divine. They should have courage, self-confidence, enthusiasm, zeal, devotion, and that this may be possible they must be trained in the atmosphere of liberty, wherein alone self-respect and self-reverence, the foundation of all virtue, can be learned. They must be able to do their work with a cheerful and joyous spirit, for whoever does well and wisely acts in this spirit. That they may dwell in the pure air of high and tranquil thoughts they should be protected from all annoyances and restraints other than those necessarily involved in the work they do. They cannot succeed if they have not the willing mind to which nothing is hard, and everything, therefore, should be done to create and foster in them love for their work.

The brave and cheerful delight us, have power over us and influence us for good, because their world attitude is the result of a true view of things which in revealing to us that to be is better than not to be, creates within us the feeling that the more we are alive the more nearly we are akin to the eternal source of all that is.

To these help-bringing and joy-inspiring souls Colonel Parker belongs.

That he was a lover and molder of teachers it is not necessary here in Chicago, or in America, indeed, to affirm. As the principal of the Cook County Normal School he sent forth, year after year, eager, enlightened, devoted men and women whose work in the schools of Chicago has not been rightly recognized or appreciated by the people of the great city in which they have wrought with so much intelligence and zeal. He himself was not understood or esteemed at his real value except by the few who

entered the narrow circle of his personal influence. How shall an idealist, an enthusiast for human perfection, have honor in a world given over to the worship of Mammon and vulgar success? Yet how pleasant it is to see an American who is enthusiastic about anything that is not a mechanical invention or a gold mine or a phenomenal increase of population or territory or the sudden emergence of a plutocrat. But money and machines never inspired a noble thought or a pure love or an unselfish devotion. They cannot create the moral climate wherein the bringers of divine gifts live.

They tend to make men the victims of routine and detail; they beget a servile spirit by turning thought and desire to the pleasure and the power which wealth procures, away from the pleasure and power which are born of the exercise of the higher faculties, which spring from the activity of the soul, from the intellect, the conscience and the imagination. They destroy faith and freedom and fashion a public opinion which calls liberty license, and accustom the people to prefer material interests and ends to those which are ideal and absolute. So the great principles and heroic faith which enabled our fathers to establish this government are forgotten and forsaken. There is no more certain symptom of such general decay than the loss of liberty in the schools. If the individuality of the teachers is repressed, if their sense of security is enfeebled, if it is made difficult or impossible for them to work with brave and cheerful hearts, if they are controlled and hampered by petty rules and regulations, nothing can save the school itself from ruin.

It was his firm grasp of this fundamental truth that made Colonel Parker an educational leader, a lover and teacher of teachers; and if we are to save our democratic institutions and civilization from destruction we must more and more work in his spirit—*Chicago Teachers' Federation Bulletin*.

EDUCATION FOR GIRLS.

BY JEANNETTE WINTER HALL.

What has for two decades been called the New Education is no longer an experiment, it is an established fact, and the underlying principles of this one-time innovation are now the foundation principles of our school system. But in undertaking so much that was new, it has been found difficult to choose the best method of application and a mass of work has been piled upon teacher and pupil until opposition has been aroused.

Parents complain that the course of study is overcrowded and pupils are unable to learn with thoroughness the fundamental studies, because there are so many "fads" by which term is usually meant music, drawing, nature study, manual training and domestic science. So general has this dissatisfaction become that educators have taken up the problem, have found that there is ground for the complaint and have offered various solutions.

All admit the confusion and want of thoroughness; nearly all agree in designating music, drawing and nature work as essentials and not as fads and many include also manual training and domestic science.

Dr. John Dewey* offers an explanation and a solution. He attributes the difficulty to the machinery of the teaching and not to the subjects taught. He explains that the whole regime of the school was planned for the advancement of pupils in reading, writing, arithmetic, and kindred subjects and in applying the same methods and machinery to the teaching of studies of an entirely different nature there has been produced the confusion regarding which there is so much complaint.

As a solution he advocates a change in the running machinery of the school.

Naturally out of the general unrest

has come the question, What is the good of all these new studies? Before the public is willing to have the school regime overturned it must have a satisfactory answer to this question.

If the study of music, drawing and nature, manual training and domestic science were designed solely to produce musicians, artists and enthusiasts, carpenters and cooks, the introduction of such branches into the school might well arouse opposition, but the real importance of these studies lies in their ability to train the ear, the eye, and the hand and to facilitate power of expression or rather to facilitate the expression of power.

Those studies which enable one to give to others that which he possesses must be considered essential.

What is education? What are its ends and aims?

Education is not simply the accumulation of facts, education is the development of power and of facility of expression. Its ends and aims are so to develop an individual as to make him most useful, most able.

The writer once thought that simply to know and to expand one's intellect was a sufficient reason for study but has come to believe that the only excuse for spending time in study and the only reason for knowing is that one may have power to *do*.

The world is moved not by what one has within but by what he gives out.

If, then, our premise is right and doing rather than knowing is life, we must conclude that much of the time and energy of school life now devoted to the accumulation of facts might be better employed.

Let me reiterate, that which one knows is useless unless it finds expression. The studies then which give power of expression, i. e., drawing, music, gymnastics, manual training and

*"The Situation as Regards the Course of Study," read before the National Educational Association, Detroit, Mich., July, 1901.

domestic science are necessary to real education.

Those studies which develop power are:

(1) Those which especially develop the intellect, under which head come mathematics, science, and some phases of classical language study.

(2) Those which give culture, among which may be classed literature, modern language, history and kindred subjects.

(3) Those which are utilitarian, namely, the fundamental reading, writing and arithmetic studies, the domestic and manual sciences.

All studies have value in more than one class but have here been classified according to their predominant value.

To be well educated one must have;

(a) a well trained mind that he may think for himself;

(b) culture, that he may know what others have thought and done;

(c) power of expression that he may give to the world the result of his thoughts,

(d) and ability to solve the problem of living.

These general principles apply to the education of boys and girls alike.

Let us proceed to a consideration of these principles as applied to the education of girls.

Time was, when a girl was thought to know all she need know if she could cook and sew, could play and sing a little and could produce unclassified biological specimens in worsted. But womankind became ambitious and longed for wider knowledge.

In 1862, a New Jersey girl* who could bound twelve states and knew a few other geographical facts, who could recite the multiplication table with a few other tables, was said, therefore, to have proven that women *can* learn.

Women made rapid progress and in 1834 Oberlin College was opened to women for higher education. They soon demanded and obtained admission to other colleges and universities where they worked shoulder to shoulder with men. They claimed equality and proved their claim. In spite of all opposition

and pessimistic prediction women have taken and assimilated college education and have come forth unharmed. But with this victory the pendulum swung too far and a woman is now thought to be educated, if she has a trained mind although she cannot apply it in any branch of domestic life.

The discomfort and unhappiness which this condition engenders in the homes and the increasing number of women who shun domestic life is forcing the people at large to ask, Is the school curriculum as now arranged giving the girl the best education?

If education is that which gives power, the best education is that which gives power in the line of one's natural activity.

What is the line of a woman's natural activity?

She was created for the purpose of perpetuating the race and to be a help-mate for man. There may be some objection to this definition but it is founded upon history, science and theology.

The fact that many women do not carry out this destiny does not alter the case. More than half become mothers physically, many more do so spiritually, while all who engage in domestic lines of work and the teaching of youth carry out at least a part of this destiny.

Woman in the first flush of power, having proven that she was mentally equal to man made the mistake of thinking that equality meant likeness and thought she must study the identical subjects which men studied, do the same kind of work and influence the world in the same way. In looking for avenues of power woman overlooked the home, neglected to see her opportunities for influence there and reached out for a man's work in a man's way.

A woman's education should be such as will make her most useful in a woman's way. She must be strong in body and must know those things which will enable her to give her children strong bodies.

Little more than this was demanded of the primitive mother, but life has become so complex that a mother must now know how to select and prepare nourishing food, she must know how to

*James H. Van Sickle in Proc. N. E. A., pg. 95.

make hygienic clothing, she must understand the laws of growth both of mind and body, she must understand the development of the mind that she may guide and direct it.

What are our schools doing in this matter? Are they training for good motherhood? Alas, no!

The public schools with a few shining exceptions are planned for boys and teach those things which best develop boys; the high schools and preparatory schools with few exceptions and even the greater part of the schools especially designed for girls, are so busy fitting for college that they pay almost no attention to fitting for life; and the colleges, following the old time traditions, are fitting for professional work.

What is the result? Do girls look forward to education as fitting them for home-making and child-bearing, or do they look upon it as a preparation for teaching and other lines of professional work? When a girl completes a college education, marries and has a family does she rejoice that now she can put her study into practice? Sometimes yes, but more often she sighs, "After all my years of study here I am cooped up in the house taking care of babies." This mental attitude is by no means peculiar to college women. The woman whose mind has been broadened by advanced work is less likely to have this mental attitude than is the high school graduate, who thinks it a great waste of time and talent for her to help in household duties when she might be "doing something."

There is something wrong with an education which unfits an individual for the natural function of life or makes its legitimate duties irksome.

Mothers aggravate this weakness of the schools by exempting their daughters from all home duties in order to give them more time for school work, altho the mothers themselves may be overburdened. In this way they unconsciously say the school work is more important than the home-making and degrade their own position in the daughter's eyes.

Girls ought to feel that home-mak-

ing, with its natural accompaniments, is of paramount importance.

A girl would better fail in her history class than fail to keep her room in order, she would better, for a time, fail in all her classes than fail to learn the lesson of helpfulness and self-sacrifice in the home.

Parents have been so impressed with the importance of mind education that they have lost sight of the greater importance of character building and the maintenance of health.

A girl has a right first, last and all the time, to good health. No education should be allowed to impair it. Dr. G. Stanley Hall* puts the thought in the form of the pertinent question, "What shall it profit a child to gain the world of knowledge and lose his own health?"

What shall we do about it? There is but one answer; let us fit the education to the girls and not try longer to fit the girls to the education.

Investigation by specialists** in child study has shown that child life is divided into periods, each one with marked peculiarities, which indicate the fitness of certain branches of study to develop the child during those years.

The years between seven and nine are the years of greater nervousness and listlessness—a time when attention should be given to the health, when stories are the best vehicle of instruction, and when muscle development should be confined to those muscles involved in the larger, full-arm movements rather than to those that require the finer adjustment of finger movements. It is, therefore, not the time for drawing and writing and is too young for piano practice.

The years from nine to thirteen form a period of activity and vigor. It is not a reasoning period, but a time for line upon line, precept upon precept. A time especially favorable to memory work and drill. During these years methods which aim to make work easy and entertaining should be laid aside for those methods which compel the pupils to dig for knowledge.

Pupils must be drilled and drilled

*Forum, Sept., 1901, pg. 25.

**Forum, Sept., 1901, pg. 25.

again until the foundations of future study are firmly laid and the facts which form the basis for future work are well in hand.

If there is too much work for the pupils and they cannot be thorough, let there be less attempted. Let some of the show performances be left out. Most of the exhibitions and entertainments given in the schools serve but to divert the child's mind from its legitimate channels, to produce nervousness and self-consciousness in the pupils and to sap the energies of the teachers.

At no other time in a girl's life is it so essential that she should have plenty of romping, vigorous play in the open air.

Girls should have the same games as boys, and there is no more danger that they will be injured by the exercise, provided they are dressed in loose clothing which will permit free muscular motion and unrestrained chest expansion. Running strengthens the lungs, the legs, the hips, and the back, and develops the abdominal muscles which will be so important in the girl's later life. Climbing, rowing and swimming develop the arms and shoulders and increase the lung capacity; ball and tennis not only develop the body but train the eye and induce quick thinking and good judgment.

The injunction to "be a little lady" does not belong to this period. Let her first be a healthy little animal and later she may become both a woman and a lady.

The girl of this age may have the same mental drill as a boy requires. She may also take up piano practice and domestic science. When a girl learns to sew let the object be to make something rather than simply to learn to sew. If she can express her ideas in cutting and sewing she is likely to enjoy it. In giving a girl her first lessons in housework let her have something which she likes if possible. If there is one piece of work which she especially dislikes try to exchange it for something less distasteful but equally useful.

Present the helpful side of the work rather than the developing side and most girls will respond much more readily. The question, "Would you like to help?"

usually brings an affirmative reply, while the statement, "Come now, it is time you learned to work" is likely to arouse antagonism.

If a girl has marked talent for drawing, music or writing and dislikes housework, shall she be compelled to do the things which she abhors and neglect the things she loves?

Why not let her time for music and drawing depend upon her helpfulness in the household. Appreciate her gifts, sympathize with her in her tastes and ask her help in the home duties in exchange for time and money to carry on the work she loves. As a means to this end the household duties will scarcely be irksome.

At the age of about thirteen a girl reaches the adolescent period and she then becomes so different from her brother that advanced educators* are advocating separate schools, special studies and women teachers. During this period a girl needs training in the womanly things. Surely more women would turn to domestic lines of work if their training were in this direction.

A girl trained only to reading, writing, mathematics, history, geography, language and literature when looking for a field of labor, naturally turns to one in which her acquirements may be used, and when she enters upon higher education she as naturally follows the line of her preparation. If in addition to these studies she has special physiology and hygiene, cooking and sewing, she is ready to grapple with some of the really feminine problems of life. Why is it that girls are thought to be fitted for the difficult profession of motherhood without training? If a girl is to be a nurse, she has training in a school for nurses, if she is to be a caterer she studies in a cooking school, if a dress-maker she works under skillful supervision, if a teacher she studies in a normal school, but if she is to be a mother, in which case she must even bring into being the child which she must later nurse, feed, clothe, and teach, she is supposed to be prepared by maternal instinct.

*The Ideal School, G. Stanley Hall, Proc. N. E. A., pg. 485.

The schools should certainly recognize the profession of motherhood as well as the profession of teaching, and should give some preparation for it.

Domestic science has been in practice for about three years in the Chicago public schools and has been carried on at a cost of \$1.81 per head per year.* The advantage of learning cooking and sewing in the schools as well as at home lies in the presentation of the scientific side of the subject at school and the practical side at home.

In the Chicago schools pupils study "the biology of yeast and vinegar, the food values of different foods, the composition of the human body and its food requisites, the reasons for the use of hot or cold water, the relative merits of boiling and baking."**

In Menomonie, Mich., the normal and domestic sciences were introduced into the schools in 1890 in a course that extends right through the school year. The superintendent, Judson E. Hoyt,*** says:

"The results are well calculated to astonish anyone who has never seen this system of public instruction in successful operation from the kindergarten through the high school."

There is also a physiological reason why girls might better receive separate instruction at this time. During the adolescent period girls need to work in a way that will enable them to periodically lighten their work. They ought not to be obliged to compete with boys during the time when nature is making such severe demands. High school girls who are nervous, irritable or anæmic are working under wrong conditions. If they cannot have special schools, they may still have special treatment if their mothers are alive to their needs. Many of the wrecks among mothers and the frail specimens among their offspring must be attributed to overstrain at school during this period when a girl needs special care.

The mysteries of life are forcing themselves upon a girl's attention at this time and she ought to have some study which will teach her of her own body,

its sacredness to the ends for which it was created and the way to keep it in the best condition. This should be done always from the scientific and never from the sentimental side. Even in the public schools girls may have separate instruction in personal hygiene and physiology, which would satisfy their longing to know about themselves—a longing which if not satisfied produces harmful curiosity.

Specialists urge upon teachers and parents of youth in the early adolescent period to lighten the drill and routine work and to emphasize the reasoning process; not to expect such minutely perfect execution but to allow more scope for individuality of thought and expression.

Shall a girl have a college education? By all means if she desires it. A trained mind is far better able to grapple with new problems than is an untrained mind and there seems to be no good reason why college men and women should not study together. Coeducation once looked upon as a doubtful experiment of unsophisticated westerners has become an established custom East and West. During her college course a woman is forming life-long friendships, and it is essential that she be associated with men as well as women. Here men and women have opportunity to find congenial mates. The percentage of marriage is higher among women of coeducational colleges than among those in women's colleges. According to our definition of a woman's destiny this would seem to be an argument in favor rather than against coeducational colleges.

The curriculum of the college and university has become so generally elective that there is now every opportunity for one to choose those studies which will best educate woman and a particular woman. The difficulty is that the secondary schools have given the girl a wrong idea of what a woman needs and she is not prepared to elect those studies adapted to her best development. A change in the secondary schools will enable the college course to adjust itself.

Dr. Henry Crew says, "A college ed-

*Proc. N. E. A., pg. 258.

**Henry S. Tibbets, Proc. N. E. A., pg. 259.

***Proc., N. E. A., pg. 269.

ucation for a young woman should include

"(a) Something that will give her a fair acquaintance with herself.

"(b) Something that will give her an excellent working knowledge of her own language.

"(c) Other things that will train and develop her powers."

Those studies which will give her an acquaintance with herself are biology, physiology and psychology. The importance of these branches in the education of a young woman can hardly be overestimated. Through the study of biology a woman learns the value of life in general, the long course through which the race has come to its present development; learns to understand something of what each individual must pass through in its development; sees the wonders of its adaptations and imbues her with the sacredness of her obligation to bear and rear healthy children.

Through the study of psychology she learns the racial steps of mental development and the steps of mental development in the child. With this knowledge

she can interpret the manifestations and influence the development of the child's intellect. A Bryn Mawr alumna* says, by all means, if a girl has but one year in college let her study biology in preference to physics or chemistry, but if she have a full college course let physics and chemistry precede the biology.

Those studies which train and develop a woman's powers and those which give her a working knowledge of her own language would not necessarily differ from those studies required to develop the same powers in a man and need not, therefore, be dilated upon.

From the beginning to the end of a girl's life let us keep in mind the fact that she is to be a woman and will need a woman's power. If her education is adapted to her needs it will make her man's equal but not his image, rather his counterpart. A man will always have his special realm in which he excels, but a woman may also have a realm over which she reigns supreme, and through which, in the molding of men and women, she may rule the world.

*Mrs. Helen Coale Crew.

CHILD LIFE AS RECORDED IN HISTORY, AND ITS PLACE IN KINDERGARTEN TRAINING AND PROGRAM WORK.

BY NINA C. VANDEWALKER.

That education should lead the child to see the unity of life is one of the cardinal doctrines of the Froebellian philosophy, and the realization of this end determines in no small degree the form and method of kindergarten procedure. The subject-matter of the program is selected with reference to this end; the character of the nature work is determined by it; the songs and games are chosen to enforce it, and the gifts and occupations have this as their main purpose.

Admirably as this fundamental thought has been worked out in many lines of kindergarten work there are other phases of the same truth which are equally adapted to its illustration, but which have been neglected, both in the work with children and in that of the students in training. "The human spirit is a living unity, and it should never be content with a fragmentary expression of its wholeness," says Froebel. If the child is to feel the unity that binds the members of the family into a living whole; if he is to trace a few of the lines that connect him with the industrial order; if he is to see the relation between man and nature, does he not need equally to see and feel the unity of mankind? The solidarity of the race was a favorite theme with Froebel; the development of the race his favorite study. Is it not because of his own insight into the development of the race as a whole that his insight into the development of the child was so clear? Where is the unity of life more apparent than in the study of race life? Where can the course of development be more clearly traced? In view of Froebel's emphasis upon the parallelism between the development of the child and that of the race, is it not strange that race development—anthropology, if you will—should have received so little attention in train-

ing work. The child needs to see the unity of humanity as he needs to see unity along other lines. But whether or not the child needs this insight, the student in training unquestionably needs it, if for no other reason than that without it she can only partially grasp the principles of Froebel's philosophy.

The emphasis upon the technique of the kindergarten in most training schools, and the consequent crowding out of the course the studies that give the larger view, is one reason for the lack of real insight into the fundamental principles of kindergarten procedure on the part of kindergarten graduates. The training teacher expounds the law of evolution to her students, and wonders why their application of it is so mechanical. Had they made a systematic study of biology, their insight into the significance of the law would enable them to grasp Froebel's conception of education, and to apply it intelligently to the work with the children. The parallelism between the development of the child and that of the race is pointed out to students, but it makes no impression and produces no appreciable results. Were they familiarized with the facts of race development, their insight would be immeasurably clearer; and their practical resources would be materially increased. Many other illustrations might be given of the value of the larger view. Is it not expecting the young kindergartner to make bricks without straw to ask her to apply principles intelligently when she is unfamiliar with the facts upon which the principles rest?

In the writer's judgment there is no subject of general culture that clarifies the student's general knowledge more, or that illumines the principles of Froebel's philosophy to a greater degree than the subject of anthropology. For it is not enough to study the present-day child only. A knowledge of childhood

in other ages and under other conditions is needed to show what is fundamental and permanent in child life, and what is accidental, or the result of environment. A study of any of the phases of a child's development gains immeasurably in significance and value if made in the light of the genesis of the corresponding power in the development of the race. At the present time primitive art and art forms are receiving especial attention, but a knowledge of culture history in general is needed to determine the value of such forms in guiding present-day procedure.

The value of a knowledge of race development is frequently touched upon in Miss Blow's "Symbolic Education," though the treatment of the subject is too comprehensive for the student to grasp without a preliminary study of the facts upon which the generalizations are based. Dr. Denton J. Snider has made a valuable contribution to sociological and anthropological literature in his recent book, "Social Institutions," a contribution that will be of service in interpreting Froebel's conceptions in this respect, but it also presupposes an acquaintance with the facts of descriptive anthropology, which the average student can hardly be expected to possess.

Recognizing the need of a knowledge of anthropology in a kindergarten training course, the writer has evolved a course known as "Child Life in History," which is given each year to the seniors of the kindergarten department in the Milwaukee Normal School. In working up the course valuable suggestions have been made by Dr. Herbert E. Bolton and Mrs. Grace Darling Madden, of the department of history. The main purpose of the course is to give as clear an insight as can be obtained into the family life of significant peoples in the representative stages of culture history, that the conditions of child life may be noted, and the progressive character of its activities recognized.* The selection of topics from the general field of an-

thropology is determined by this purpose, but the interest in the course has led to sufficient collateral reading to give a fair insight into general anthropology. The results of the course have been more than satisfactory. The students' interest in child life has been materially broadened and deepened, and their insight into the principles of Froebel's philosophy is perceptibly stronger.

Because of the student's familiarity with the facts of child life among representative primitive peoples, a line of work has been carried on in the kindergartens connected with the Milwaukee Normal School the past winter that has proved both interesting and satisfactory to all concerned. The child life of representative primitive peoples, such as the Eskimo, the African, the Indian, and others, has been made the basis of the program work, the organizing principle being the dolls with which all children play, whatever their culture status. The point of departure was a collection of dolls made at Christmas-time, the collection being purposely made to contain an Eskimo doll, an Indian doll and a black doll, as well as several others. Imaginary journeys were then made to the children who played with such dolls, and the story of how these children lived and played, and how their mammas and papas cared for them, was told by means of original stories based on known facts, aided by pictures and blackboard sketches. The children thus lived in imagination in the igloo of their Arctic neighbors, or visited in the hut of their tropical friends. They played the games of the children whose guests they were for the time being, and represented their homes or characteristic implements by means of appropriate gift or occupation material. If children of kindergarten age can realize in any degree that their life is one with that of the bird, from a consideration of the bird mother's care for her nestlings as suggested in the mother play, "The Nest," they realized more fully from the work outlined that "God hath made of one blood all the nations of the earth." If they can grasp, even in the most feeble way, the dependence of man upon nature, from the customary work upon trades and occupa-

*See the author's articles, "Some Demands of Education upon Anthropology," *American Journal of Sociology*, Vol. IV, p. 69, and "The culture Epoch Theory from an Anthropological Standpoint," *Educational Review*, Vol. XV, p. 374.

tions, they grasped the meaning of that truth more clearly from the work described. And if the child needs the story of the farmer or the miner to give him an insight into the social significance of labor and the laborer, does he not need equally the lines of work that show him the unity of mankind, and that inculcate respect for peoples other than our own, regardless of race, color or social condition? That the child needs the symbol—truth in a simple form—as a key to the interpretation of truth in its more complex forms is one of the fundamental principles in Froebel's philosophy. The picture of social and industrial life in these simple forms is the simple truth—the symbol—by means of which the child interprets the more complex life about him. It thus serves a manifold purpose in his development.

There are doubtless many kindergartners at the present time who would hesitate to undertake any work along this line because of recent criticisms made by Miss Blow upon Hiawatha as a subject for work in the kindergarten. The criticisms may have been more than justified in the cases described—any subject may be so handled by an inexperienced or incompetent kindergartner as to violate the principles upon which the kindergarten is based, even those approved by Miss Blow herself; but the inference that the work was un-Froebellian because Hiawatha was selected as the subject is, in the writer's judgment, wholly unwarranted. The kindergartner who has taken up this or similar lines of work may have deserted the Froebellian standard and enlisted under the banner of Herbart, but the fact of her having selected the story of Hiawatha—a type of child life—is no evidence that her loyalty is questionable.

It may be true that Hiawatha is not a moral ideal to be presented to the children, though even that may be questioned, but does it prove the story of Hiawatha, or similar work, valueless even if it is true? Holding up moral ideals is unquestionably one of the fundamental purposes of story-telling, but it is not the whole purpose. If it were, most of the stories of plant and animal life would have to be discarded, as well as the

stories of industrial life that aim to give clear mental images of things or processes for the purposes of comparison of any sort. Whether or not a subject is an "arbitrarily chosen center" depends upon the kindergartner's insight into children's fundamental interests, and her skill in leading from certain expressions of that interest to other and related forms. Many of the subjects supposed to be thoroughly appropriate are practically "arbitrarily chosen," because the power to lead the children out from their own fragmentary thought is lacking on the part of the kindergartner. The work in question may be one of the most effective means in aiding the child's confused thought to "unwind itself." That the children to whom Miss Blow referred were not interested needs another explanation than inappropriate subject-matter; as a rule they are highly enthusiastic. That they did not wish to live as Hiawatha did is no proof that the work was unsuccessful; it may have indicated instead that they had interpreted modern life in the light of primitive conditions, and that they had begun to appreciate in a degree the advance of civilization.

In the criticism in question Miss Blow pointed out the importance of leading children to recognize, if ever so feebly, the spiritual solidarity of human life, *i. e.*, the unity of humanity through the work in the kindergarten. That such recognition comes fundamentally through the child's own experiences of the unity that binds him to those about him in ever-widening circles, no one will question, but it is precisely because the work outlined supplements and enforces this important thought that it was taken up and advocated. Jane Andrews' "Seven Little Sisters" shows that its author had grasped this important point, and it is because the children feel the living truth it embodies that it has become a classic. The thought it contains is no less valuable for children of kindergarten age.

If students in training were given the larger survey of the field of thought they would find it less difficult to lead the children into right ways of thinking, feeling and doing. Modern educational thought has rejected the Herbartian doc-

trine of the ego; even the Herbartians themselves acknowledge self-activity to be the corner-stone of education.

The broader the kindergartner's culture, the more significant will the philosophy of Froebel become to her, and the more thoroughly will she grasp its ap-

plications. It is because Froebel himself was a man of large views that his work has a permanent value. If the kindergartner would have her work marked by the same quality she must follow his example.—*Kindergarten Magazine*.

THE TEACHER'S WORK.

BY SUPERINTENDENT SAMUEL HAMILTON,
Alleghany County, Pa.

Teaching is a noble work. It borrows honor from none, but confers it upon all. Like all honorable labor, it never degrades, but always dignifies those who engage in it. In this respect our teachers are not exceptions. As a rule they are thoughtful students of their profession, and zealous, earnest and sincere in their work. And life in such an atmosphere always ripens its legitimate fruits; for lofty conceptions of life and duty, broad and generous sympathies, and richness and beauty of character always confer moral dignity upon those who set their ideals high and strive earnestly to realize them.

No other work is more difficult. None requires such wisdom, such tact and such patience. To succeed, the teacher must be "an active, aggressive, intelligent, compound of love, zeal, wisdom, virtue and justice." Superior scholarship is not sufficient. It must be reinforced by that subtle power we term force of character. For the greatest lesson the teacher ever teaches is herself. Her love of order and beauty, her kindness of heart, gentleness of speech, politeness of manner and firmness of purpose are the molds for the plastic materials of character. By these she reproduces her moral characteristics in the life of the child, and projects her force of character far into the future through the life of those unconsciously framed in her image. And while her body is moldering in the dust, like John Brown's, her soul goes marching on. This building of character is the most difficult, as it is also the most important

part of the teacher's work. And to accomplish the full measure of success requires the deepest insight into life and character, the broadest sympathies with childhood, and everything that wisdom, scholarship and skill can supply. It is not an easy thing to be always wise with the foolish, firm with the wayward, patient with the dull and gentle with the weak. This may seem like a high standard, but not too high for the true teacher, whose observations must, in a measure, be quick and accurate, whose conclusions must be correct, whose enactments must be right, whose decisions must be wise, and whose administrations of affairs must be just. And the teacher who can measure up to this standard is always esteemed for her wisdom, respected for her zeal, admired for her talents, loved for her goodness and appreciated for her worth.

No other profession calls for greater skill. Teaching is an art, and the true worker is an artist. Childhood is her material, the schoolroom her studio, the facts of science and the incidents of school life are the tools, and the human soul is the finished picture. How delicate and sensitive the material, all instinctive with the subtle mysteries of life! And how keen the perception of moral beauty, and how rare the skill of her who would spread upon the canvas all the surpassing loveliness of the human soul! The material and tools are at hand, but it requires the teacher's artistic touch to awaken thought, arouse energy, stimulate desire, kindle enthusiasm, and call

into action all the slumbering powers of the human soul that give tone and color to elements of moral beauty.

The teacher who undertakes this work assumes a great responsibility. To her it may be said in all truthfulness:

"To yourself

You have assumed responsibilities
Of crushing weight. A mighty, peerless work
Is thine. The golden chords attuned by thee,
Or grown by thy neglect discordant, not
In time alone, but throughout all the ceaseless
Ages of eternity shall throb. And should
At last one note be found in dissonance
With virtue, truth, and harmony, methinks
A fearful guilt will on thee rest."

* * * * *

The work of the teacher is often vexatious. She is subjected to many petty annoyances and unjust criticisms. Her motives are often misinterpreted, her plans misunderstood and her acts misrepresented. Parents ordinarily take little interest in the school. Barring hearsay evidence, they scarcely know that it exists. Their knowledge of it generally comes to them through the silly gossip of the community, or the childish reports of pupils. Thus teachers are often indicted, found guilty and sentenced in the court of public opinion without the testimony of a reliable witness, or even the courtesy of a trial. The testimony of gossip should be ruled out of court, because it is not often founded on fact, and therefore always totally unreliable. Children mean to be truthful and just in their reports of the school, especially if they are not a party to the suit at issue. But children dwell in the wonderland of imagination, rather than in the clear atmosphere of reflection and judgment. Their minds are telescopic. They view everything from the large or the small end of the instrument. As a result, some facts are greatly magnified while others are as much reduced. These children often misunderstand the plainest statement. "Only the body, and not the soul, is put into the coffin at death," said a lady in trying to teach her boy. "And what do they do with the head and legs," innocently asked the boy, "if only the body is put in the coffin?" A lady whom I know said to her boy: "Phil, Mr. B., the minister who lives next door, is an

elderly gentleman and a very nice man. You must be polite to him or I will not permit you to talk with him at all." The boy thought he understood the facts. The next morning the minister met him and as usual addressed him in his kindly way. The boy drew himself up to his full height, cast a reproachful glance at the reverend gentleman, and then replied: "Mamma said you were not a nice old man and I'm not to talk to you at all." Children mean to be just, but their testimony about school affairs is not generally trustworthy, and should have but little weight.

Thus some parents come to regard the teacher as a cruel, unjust, unreasonable taskmaster. Cruel, because she sometimes administers the punishment which lack of home training made necessary. For the child is a citizen of two kingdoms, and the outlaw in the home always wants to be an outlaw in the school. To some she is an unreasonable taskmaster, because she demands of the pupils some systematic work. There are many parents in this age who seem to have lost respect for the education that requires work. They want their children educated by some new and easy, painless, effortless, automatic, self-adjusting, double-acting, triple-expansion method that eliminates both time and effort. They oppose much school study, and are the champions of "no home study." In their silly, incoherent tirade against study they should remember that the tree in the orchard that bears the best fruit is sometimes clubbed the most. And the parental exponents of rapid transit methods in education should note that God can make a mushroom in a night or a squash in six weeks, but not so with the oak. It requires a century of rain and storm, of sunshine and plant food to produce the sturdy oak with its wide-spreading branches, its strong clinging roots, and its tough fibrous wood.

Thus the work of the teacher is often made more vexatious by these querulous critics than it would otherwise be. And few seem to appreciate to any extent either the work or the worry, much less the worth of that class which is the right arm of modern civilization and the very source of modern progress.—*Report.*

THE SUPERVISOR'S OPPORTUNITIES.

BY LAURA FISHER.

One defines things according to the point of view. In youth and student days we believe that those things alone are opportunities which offer some personal advancement or preferment, and in the main some chance for pleasure. Therefore the young man looks with something of envy, and speaks with a self-pitying sigh, of one he believes to be his more fortunate neighbor, who has every luxury of wealth, every means of self-gratification, no need of effort, no concern for the distant morrow. He defines opportunity, if he defines it at all, as lucky circumstance, in the midst of which sits the individual free from the necessity of doing anything; one who has but to choose from out of the many enjoyments of life those which most attract him. It does not require many years of experience to teach us that opportunity does not lie in passive enjoyment, in mere ease and plenty; but that it is bound up with and never far away from duty, responsibility and activity; that a life of ease and plenty, even as the life of strenuous effort, can find its opportunities and grasp them in this way alone. The kindergartner is not unlike the rest of human beings. She, too, believes much, in her early days, in external circumstance; she thinks that she could do great things if she had her sister's chance. If she were only at work in a less difficult district; if her children had better homes, or less indulgent mothers; if she did not have so many, or if she had only a few more pupils in her class: if her principal were more expert, or if she had more chances to do things her own way. Opposing arguments meet one on all sides, where the explanation of opportunity lies in external conditions and outward fact.

Fortunately, with increase of power, with inward growth, the vision changes and the meaning of opportunity changes with it. We come to see that every condition may be an opportunity;

that difficulties do indeed challenge our powers and strain them, but that they occasion their exercise and unfolding; that it lies in us whether they shall become great opportunities for growth or great barriers to development. Until one learns to see both advantages and dangers in all conditions, nothing can really be said to be an opportunity; until one endeavors actively to struggle with these dangers and actively to employ these advantages one must be the victim of even the best and most alluring conditions. In speaking, then, of the supervisor's opportunities, I shall not dwell upon those external advantages which are generally observed by the eye that sees only the outward circumstance, and are generally mentioned as reasons for considering the office desirable; but I shall consider the possibilities which such a position offers to the strenuous soul for service, effort, growth and responsibility.

Let us ask ourselves, first of all, what is necessary to the making of a supervisor? The position of supervisor presupposes experience as a student, a practical kindergartner and a normal trainer. The supervisor should understand what the course of training given to students is, and what it should be and why. She should know how students are being equipped for the work they have to do, that she may also know what they are capable of doing when they present themselves to her as candidates for appointment. Unless she has been a student she cannot know what young students can do and what therefore may be legitimately expected of them. To have been a student, therefore, makes possible a comprehension of the capacity of the inexperienced and a sympathy with inexperience. In her relationship to the young student body lies the supervisor's opportunity of renewing and keeping renewed in herself this hopeful, undaunted, youthful heart and soul; of

believing that all things are possible and that achievement is assured. It offers her also the opportunity to hold fast her faith in the possibilities of the young and aspiring, to make sympathetic allowances for youth's legitimate follies and pleasures and to look at life with earnestness and joy instead of with serious despair or desperate seriousness.

The practical experience of the kindergartner places the supervisor as a fellow-worker in the midst of her associates. The problems they have to meet, the difficulties they must overcome, the unexpected situations in which they find themselves, these she, too, must have known. Having known them she may hope to help in meeting, solving and conquering them. Unless she, too, has been a kindergartner and wrestled in her soul as well as in actual experience with the wayward, the idle, the disobedient child; unless she has endeavored to adjust the ideal and the actual; unless she has struggled with the disheartening conditions growing out of neglected homes and has fought for the redemption of the young soul; unless she has worked and been weary, struggled and aspired, fought, failed and conquered, how can she face the weary, struggling and aspiring, and dare to believe, and to ask them to believe, that they, too, will conquer?

The experience of the normal trainer is necessary to the supervisor in order that she may know how to prepare teachers for their work with children as well as how to teach the children; that she may understand, explain and practically demonstrate principles and methods; that she may constantly keep in view the large outlook, the fundamental basis, the ultimate goal of the work, and relate its details to the principles out of which they spring. That these varied experiences are rich opportunities to any individual who has had the good fortune to know them, none can doubt; but even these are not the greatest opportunities of the supervisor.

The supervisor stands in a manifold relationship to the educational world; to the children whose development is her immediate goal; to the body of teachers who constitute her immediate respon-

sibility; to the normal training school which equips young people for the work she directs; to the school committee in whose service she acts; to the great outside educational world of which she is a working member. Toward each and all of these she has duties the performance of which offers rich and varied opportunities.

It is easy to let the thought of the children degenerate into mere attention to proper supplies and equipment; to permit her relationship to teachers to become either good-humored indifference or ill-humored criticism; to make her association with the normal training school a mere perfunctory oversight of its curriculum; to turn her connection with the school committee into personal politics, and to calmly ignore what educators think and do. But just because her office brings many responsibilities does the supervisor need all the help that can come from right living in the midst of these many relationships, and no one can realize more keenly than she how her specific work suffers when any of these sources of help are ignored.

It is impossible in a short paper to tell in detail what is contributed by each of these sources; to illustrate how the right perspective in regard to one's specific sphere of activity can be achieved only as one keeps in view the broader field of work and workers of which one's own is only a part, and to test one's specific goal by its identity with the universal goal of all education. For it is true of all things and of each life and vocation, that it is secure only when called to its "universal consecration."

It is interesting to recall the kind of help and suggestion that come from working with a school board, and the kind of training such connection offers.

But the center and the heart of the supervisor's work lies in her relation to the body of teachers with and through whom she works; all the riches of the other aspects of her position can avail only in and through this one; what they offer must be made effectual by means of this. The point of view again determines the result. What is the supervisor's supreme duty towards those whom she supervises? Is it criticism of their

work? Is it insistence upon the authority of her position? Is it just running from one place to another and going away again, making herself inoffensive through lack of fault-finding? Is it being good-natured and friendly and accepting everything as it is, and thus courting popularity? To my mind these are some of the supervisor's temptations, but not her opportunities.

The only hope of success in her work lies in the supervisor's ability to inspire her co-workers and to be inspired by them; these go together and each determines the other. Teaching becomes a trade when work is measured by the mere external performance or execution of its details. It becomes a profession when each detail is seen in the light of great and universal principles. In this realm, at all events, one must "hitch one's wagon to a star" if one would insure progress.

I count it a source of rare delight and benefit for supervisors and kindergartners to study together the great achievements of great minds; to be lifted in thought and feeling into the sphere of eternal and infinite beauty and truth and to walk therein together; to seek with one another's help to bring this truth and the atmosphere it creates to bear upon the details of their every-day work and life, and by its help to become members of that great army of impassioned souls who seek to bring heaven upon earth, by lifting earth and its creatures into heaven. This is what it means to me "to walk with God," and to learn how rightly to walk amongst men. In this united search after Truth, each worker is a helper. A common love for the best things of life unites the hearts of those who seek together; a common faith in its ideals produces mutual faith in one another; a common understanding of the inexorable conditions of achievement creates a spirit of respect and appreciation for those who are making the effort to succeed according to right standards, and a fine charity for those who fail but continue to strive. To see this spirit springing up in the midst of her workers and by their means is the supremest of rarely good things, the profoundest delight, and the source

of devout thankfulness to the supervisor.

The supervisor has the great privilege of making her round of visits the means of gathering what is fine and excellent everywhere, and to distribute it; she, in this way, brings to all the teachers the achievements of each and they are helped to grow by standing on the shoulders of their neighbors. It is her duty to apply the "open door" system to education, and to help each to profit by the success of all. Fortunately there are no exclusive patent rights in the sphere of ideas, and the protective system kills effort in that realm. Sharing is the condition of success and the means of growth; isolation and exclusion are the sure signs of death. Therefore she can and should *learn to learn* from all whom she observes, and spread far and wide the good news of every success. How many valuable suggestions come from the teachers to the supervisor! How mutual discussion makes clear difficult and mooted questions! How glad and grateful both must be for the light that streams in upon all from every source, and what deep attachment to a work all are building up together! It is only through those with whom she works that the supervisor can build up any system. In so far as she can make clear to them the methods, principles and details which she approves will the work in her charge realize her ideals of what it should be. She must, therefore, endeavor to illuminate minds and not to coerce them; only then will practice reflect principles. For here, as in all things spiritual, "as much the more as one says *our*, so much the more of good each one possesses," and only through union with the teachers whom she directs can any supervisor work at all. I believe that through constant meetings with a large body of teachers as well as by daily contact with individual workers, the supervisor may gain a truer insight into her work and feed her own enthusiasm. From these workers she receives an inspiration she cannot do without, and to them she looks for the help which she, too, needs.

There is no phase of the supervisor's work which does not call for a fine tact and divine patience. She knows this

best, for she knows well how often she blunders because these have been lacking. But it is in her office of critic, if you choose to call it so, that they are most needed. I often wonder whether any one but she knows how hard it is to honestly find fault; how painful it is to be forced to withhold the praise we all dearly love and deeply desire, and to point out the shortcoming or the failure. No one suffers as much in this process as she who must inflict the pain and truthfully acknowledge to herself and others that things are not as they should be. No one feels more keenly than she the disappointment that failure brings, for each teacher's failure is also hers. It is easy to say, "There must be some good everywhere. Why not dwell upon that?" There assuredly is good everywhere. But the supervisor has a two-fold duty: she should recognize and rejoice in everything that is well done, but she is responsible also for the correction and conquest of the bad and wrong; she must not ignore it, nor wink at it, nor treacherously desert the young teacher who is the victim of ignorance and inexperience. The supervisor prays for the power to remedy every fault, to cure by infusing light and life, to conquer and not merely correct; and to achieve

this by means of infinite faith and patience, unswerving honesty and justice, and an unlimited charity whose burning turns the pain inflicted upon those who fail, into gladness.

I cannot draw to a close these intimations of what, to my mind, constitute the supervisor's opportunities, without a pardonable reference to personal experience. It has been my rare good fortune for some years to work with a body of teachers employed in Boston and its vicinity, who are distinguished for their open-mindedness, their courage, their generous helpfulness and their aspiring souls. We have together struggled with many problems, fought many evils, conquered some difficulties and recognized frequent failures. To be surrounded by such associates makes hope spring high, and helps one to realize that life is indeed great and glorious. The last, greatest privilege the supervisor enjoys is that vision of the human soul which confronts her at every turn as she looks upon those who thus labor for the uplifting of humanity. From them she gathers inspiration and courage and strength; to them she confidently commits for safe-keeping and safe spreading the cause in whose service her energies are spent.—*Kindergarten Review*.

THE DANGER OF USING BIOLOGICAL ANALOGIES IN REASONING ON EDUCATIONAL SUBJECTS.

BY DR. W. T. HARRIS,
U. S. Commissioner of Education.

For many years I have been attracted and afterwards repelled by one theory and another relating to education, which undertook to reason from the body to the mind—from the brain to the soul—from the events of animal life to the events of spiritual life—and to explain the latter through the former. The attempt to reform the school in some particular by the light of physiology or by phrenology, or by the study of prehistoric beginnings of civilization has often been successful; but quite as often it

has been unsuccessful. In the former case some waste of bodily power has been prevented; in the latter case some more important spiritual power has been dwarfed or paralyzed to gain some less valuable advantage for the body.

When one first begins to think on a subject which has hitherto been purely a matter of routine and tradition with him, he falls too readily into a habit of criticism of the established order and condemns with undue haste. As a consequence his corrections and would-be

reforms all need readjustment to prevent them from doing more harm than good. For he has seen only one evil out of many or only one phase of an evil instead of the whole of it. On this account he may, by removing one evil, let in another and worse evil that has been held in check by the choice of the less noxious one.

I must confess, with a degree of sadness, that I have become from year to year, more skeptical in regard to reforms advocated in the name of school hygiene. Not that I doubt the importance of hygiene, but rather that I doubt the attainments of those who talk so glibly about it. For I see them unduly securing minor advantages at the expense of great and permanent injuries to health and normal growth.

The school-house, at first, was only a slight modification of the dwelling-house. There was light and ventilation sufficient for two, three or four persons in the room. The dark parts of the room were light enough for many purposes of housework, and if one wished to read or to sew or perform the work of cleansing or separating such articles of food as had been ground and needed sifting, or as were composed of small grains or kernels and needed picking over, a seat near the window secured the requisite light.

But the school needed a room lighted in all parts, as nearly equally as possible and with a constant supply of fresh air, heated properly. It was gradually discovered that the room of the dwelling-house was poorly adapted for school purposes. Some pupils got too little light and became near-sighted by holding their books too close to their eyes, some came to have weak eyes by having too much light; for the glare of a page on which the sunlight falls is sufficient to produce partial blindness. Even pure skylight without the direct rays of the sun will tend to do this. Many have been the so-called improvements which in correcting the evil of insufficient light ignored entirely the great injury done to those pupils who sat in the full glare of the sun or of the clear sky, and for hours, each day, tried their eyes on perceiving letters and figures in small print.

I need not speak here of the various attempts to light the room from the front of the pupil, forcing him to strain his eyes in order to make out the words of the page when seen in the direction of the source of light; the experiment of lighting from two sides, the left and the right sides, with its attendant impossibility of getting the light upon the book from either side without at the same time facing the light of the other side. The light was tried from the right side alone and the pupil had to have the shadow of his hand on the place where he was writing. Light from the left and rear came at last to be adopted with much unanimity by educational experts in this country in 1876. But the tendency to make large buildings has since that time permitted and encouraged the construction of school-houses with one-half of the rooms lighted from one side only; this, too, without due consideration of the relation between the height of the tops of the windows and the width of the room. The consequence of this is that most of our cities have schoolrooms in which there is a row of desks where pupils sit in a twilight and acquire the habit of holding their books too near the eyes; and another row of desks where the pupils have the glare of light that I have described, and the effort of nature to adjust the retina to the overplus of light dims the power of vision below the normal standard.

In the schoolroom of a building altered over from a dwelling-house there is also another attendant evil. The pupils in a row of seats placed directly under the windows are exposed, in cold weather, to chilling currents of air which are constantly flowing down the sides of the wall and especially down the window surface. Children not of robust constitution often lay the foundation of much bodily disease in this way. Improper lighting by reason of the sympathy of the eyes with the stomach produces in pupils of delicate constitution a tendency to nervous dyspepsia. Indeed, the errors in lighting and in avoiding draughts of cold air seem to me so serious that I cannot listen patiently to those who praise the countless devices which are invented for one and another trifling

advantage in the hygiene of the school-room. For it were better that they had not been discovered than to distract, as they do, the attention from the far weightier matters of light and temperature and ventilation.

One idea crowds out another in some cases, although in other cases one idea leads to or brings in another. The general idea suggests its applications. But the particular idea having small scope, may get in the way of more fruitful ideas. We have to measure ideas as to their relative value and decide for ourselves which may properly give way to the other. For example, take the unhygienic school as it existed and now exists in the countries that are backward in this matter of school architecture, and we must admit that the great purposes of the school were secured and are secured in the log school-house, in the dark, ill-ventilated tenement building rented for a school in a slum district, or in a mere shanty school in the west of Ireland. The great purpose of learning to know printed language, to become eye-minded instead of ear-minded—to gain besides one's colloquial vocabulary also a vocabulary of science and literature and philosophy—to become able to understand and use technical language—all these things came then and come now to the gifted youth without the improvements in hygiene that we clamor for. Abraham Lincoln read by the firelight of the blazing hearth and fed his mighty mind.

It is true that the average of life in those unhygienic days was far less than now. But the illiterate savage does not reach a life average so great as the unhygienic but civilized man, and what is more to the point, "fifty years of Europe is worth a cycle of Cathay." A rational life, growing in the production of science and art and literature and in diffusing the blessing of civilization, is better than a savage life, even if the latter were to have an average of eighty years, while the former were to have an average of thirty years. According to the merely biologic point of view, life is life whether of plant or animal or man, and the more of it the better. But such is not the spiritual point of view.

Some years ago, Max Mueller wrote up the theory of the sun-myth—as found in the beginnings of mythology. The stories of the heathen gods were thinly veiled allegories of the solar year, or of the four seasons, or of the diurnal revolution. The words signifying divine things were originally words describing the phenomena connected with the progress of the sun in the equinox or through the hours of day and night. Later on, the sun-myth theory was used to explain all religion. It is all founded on sun-myths. The conclusion was drawn by many devotees to philology that the basis of religion is only a personification of natural phenomena and that there is no reality corresponding to religious conceptions. It was said that the sun-myth is a disease of language. Then religion came to be regarded by this school of philologues as also a disease of language. Outsiders who observed this extension of the sun-myth theory began to expect that sooner or later the theory would be carried one step farther and that philosophic thought would be declared to be a disease of language, and sure enough this appears to be the upshot of the book of Professor Max Mueller on the Science of Thought. This is made plausible by the following steps: The words of a language stand for classes and species of objects, and not for mere individuals. *John is a boy*, says that John belongs to the class of beings known as a boy. The word "is" has universal significance as copula expressing subsumption; the article "a" expresses the general concept "one of," and even the word "John" says any boy who is called John. We have to add to language a meaning of our own to make it apply to a particular individual being and no one person's meaning of a word is absolutely what another person means by it.

Now add to this view another one with reference to the nature of objects that exist, namely, that all that exists is composed of some one or more definite things—that only particular individuals exist—and that language has made all its words stand for general classes of beings, actions and relations, and in so doing has made it entirely symbolic

instead of corresponding literally and in detail to reality; and we now begin to see where we are going. It is only one step to the conclusion that all general thought relations rest on the scaffolding of language, and are baseless as regards their truth. Generalizations of thought regarding the world and its destiny are the product of a disease of language. In fact, we might as well call language itself a disease.

But where can we stop? If the anthropoid ape invented the disease of language, his animal relatives who could not yet talk were not for that reason any more healthy. For all animal life is a disease as compared with plant life. The animal feels, perceives with his senses, and acts by impulse or instinct. To feel is to set up an activity within a self and after a sort to make one's self an object, or, so to speak, to exist for one's self. Hence to perceive other beings is to represent them by one's own activity, and thus to create within one's self a semblance of other realities. Perception thus rests upon creating within the perceiving being an *appearance* or semblance of a reality.

This is almost as bad a disease as language is, and we may see that the misfortune of language goes farther back and attaches to sense-perception itself. For the animal that feels or perceives makes for himself an image or representation, in fact a seeming or make-believe or some sort of untruth to stand for the reality.

The plant it would seem does not feel nor perceive nor move itself. It does not, like the animal, "dally with false surmise." It feeds on its environment, however. Its life is a life of assimilation and nutrition. The plant is engaged in seizing upon its environment and converting it into vegetable cells and adding them to its own structure. Here we have reached soundness and health at last, for we have realities at every step. We have the plant a reality which acts upon inorganic substances in the soil and the air, and gathering them to itself makes them over into vegetable cells of its own kind or species. But after the plant has thus acted, it has destroyed the individuality that previously existed

in that part of its environment now appropriated for food. It has annulled other individuality to build up its own. What was real as carbon and oxygen and silica and soda, no longer is real in that form. As real they are united and converted into organic compounds that form the cells of the plant. As ideal they may be still only carbon and oxygen and silica and soda. If the plant dies, its vegetable cells will be captured by inorganic forces and these elements (carbon, oxygen, silica and soda) will reappear in their old form.

Here we have to ask whether the plant life is not itself also a disease. Is it not a masquerade? Does it not act to enshroud the inorganic matter in new forms, making it as vegetable cells possess entirely new properties and lose its old properties? Does it not, after the death of the plant, let the old individuality of the elements reappear? But which is the true reality under the appearance—is it the inorganic elements or the organic compounds? Why should we not say that the inorganic is a state of helpless abstraction in which it does not realize its true being? And is it not the life of the plant that lifts up the inorganic into a higher and more concrete and perfect form of existence wherein the inorganic elements reveal the wondrous possibilities that were in them but not made manifest or brought into actual reality?

And again, if the inorganic is only itself a masquerade hiding its higher life until by the aid of the plant it comes to actualize or make real its true self, why shall we not say that the plant, also, takes on a higher form of realization when it in turn becomes feeling, perceiving and willing, on being taken up into the animal organism? For the representation of another existence than one's own is after all a higher form of reality for the being that represents. For the inorganic does not fully realize itself until it comes in the plant and the animal to show what syntheses it is capable of and in what ways it can be instrumental in the process of self-representation. Self-representation in the form of feeling is indeed something that belongs to the order of the miraculous

as looked at from the standpoint of the inorganic—it stubbornly resists a mechanical explanation.

But now, if we admit this new view of the subject we must go farther and claim that man, by inventing language, creates a still more wonderful reality. For he produces a sort of counterpart to the general process that appears in chemism, in plant life and in animal sensation. He gives an appropriate form to universals. Words make fast the fleeting manifestation that goes on in the lower orders of being. Words as tools of thought make possible the grasp of a deeper reality in the universe, which the inorganic cannot compass, nor the plant, nor the mere animal. For thought can grasp the process in which the individuality of the lower order of beings is immersed. Thought can perceive particular things in their causes and it can think a unity of all causes in a final cause.

We have to return to our first statement or the statement of the philologists and entering our protest say therefore that religion is not a disease of language nor a disease of any kind. But religion is an insight into the final and deepest order of being—the truth which is under all seeming or imperfect being, whether inorganic, or plant, or animal, or human.

Neither is thought to be called a disease of language because it deals with generalities. For the general process which is revealed in the changes that inorganic matter undergoes and which takes on new forms in plant and animal life, is first seized as the deeper reality by philosophic thought become possible through language. Thought reaches this deeper reality underlying all actualities and it joins the voice of religion in saying that the deeper reality is a divine personal reason that reveals itself in the world. That Absolute Reason has a Divine Purpose which is the creation of personal beings—training them to individuality in the cradle of time and space.

In the light of this Divine Purpose all imperfect realizations such as the inorganic may be seen to be more or less appearances having each some fragmentary or imperfect form of being that does not fully and adequately explain itself although each step above the inorganic is a nearer approach to the absolute reality. Reversing the biologic standpoint, those lower forms of existence may be called diseased. Plants just because they do not possess feeling and sensation may be said to be diseased. Then, too, the animal who is less deeply diseased because he possesses sensation and locomotion as well as nutrition—the animal is diseased because he does not possess language. He cannot reach religion or thought.

But man is more healthy and less diseased than any other being on earth because he can form some adequate idea of the Divine Purpose of the world and by that reach ultimate ideals through which to guide his life. By his thought he can see what the fullness of reality means.

According to biology as it is, many or indeed all of the higher facts and activities of man may be regarded as diseases of vital functions. But on the same ground, life itself may be regarded as a disease forced on the inorganic.

This use of the analogy, however, which makes life itself a disease, leads us to suspect the truth of the biologic view of religion and philosophy and suggests to us the necessity of turning round the measuring process. We must interpret the lower form from the standpoint of the higher. The lower is the incomplete and imperfect being. The higher is the more realized being, the more perfect, and it explains to us the existence of the lower by showing its purpose.

The analogy of the lower order of being does not suffice to explain the higher orders of being. The scale must be inverted before the human can be understood.—*School and Home Education*.

THE USE OF CURRENT EVENTS IN SCHOOL WORK.

BY FRANCIS B. ATKINSON,
Editor of The Little Chronicle.

The phrase, "The newspaper is a great educator," is almost as old as newspapers. The actual use of the newspaper by educators is almost as recent—well, say, as the first-column sensation in the morning daily; so long does the natural conservatism of the human mind hold in check the practical development of a new idea. Usually the larger the idea, the greater the inertia of custom to be overcome.

Still more ancient and venerable are the axioms, "The school is a preparation for life," and "Experience is the best teacher." Here again, however, comes in that queer mental trick of ours of saying one thing and doing another.

"In critical moments we all realize that the only discipline that stands by us, the only training that becomes intuition, is that got through life itself; but the school has been so set apart, so isolated, from the ordinary conditions and motives of life, that the place where the children are sent for discipline is the one place in the world most difficult to get experience—the mother of all discipline worthy the name."

I am quoting (from memory) one of the ablest and boldest representatives of the new education, Professor John Dewey of the University of Chicago.

Whatever the faults of the newspaper, it is the great source of information about the things the world is doing and how it is doing them; in other words, it is organized experience.

The school, then, being a preparation for life, experience the best teacher, and the newspaper the greatest of all purveyors of experience, one would have said, "The newspaper is one of the first things the school will make use of." As a matter of fact, it has been one of the last. The chief difficulty, aside from the inertia of old-established methods, at once suggests itself; namely, that the educative portions of the newspaper are not plain enough for school use, and the

harmful features are too plain. Add to this that the daily paper is too bulky and inconvenient in shape for preservation, and is not edited with a view to its connection with regular school work, and the fact that the editor and the school teacher have not heretofore co-operated to any important extent, is less difficult to understand.

Until quite recently such attention as has been given in the schools to the news of the day has consisted mainly of compilations from the daily press during morning exercises or in other odds and ends of time in the school day—of miscellaneous items about everything in general and nothing in particular. This was called "studying current events," and bore the same relation to the true study of current events that the mere memorizing of names and dates bears to the true study of history. Now, however, it is beginning to be recognized that the right conception of the educational value of what is called "news" is not to teach it as a separate study—to load another branch upon an already overloaded list—but to use it to teach most, if not all, of the other studies. To learn the location, climate, physical and political features and products of a country in connection with great and dramatic events taking place there—the war in South Africa, the uprising in China, the treaty between England and Japan, the establishment of the Australian commonwealth, for example—all and much more information than can be taught by rote in the ordinary method of studying geography—is so plainly the best and most economical expenditure of the mental effort of the teacher and pupil that only its obvious nature has so long kept it from being recognized.

"Genius," says some paradoxical philosopher, "is the art of seeing the obvious." Genius is rare.

The same reasoning applies to the study of history, civics, language—in

short, to the whole curriculum. If the studies of the school are indeed a preparation for life, it ought not to be difficult to prove it; in other words, to find abundant instances in real life to which they apply. Without such instances it is hard to see how the child is going to get anything like the good he should get out of these studies. The fact that he has been left to acquire the most valuable part of his education—a knowl-

edge of the world—after he left school has been the fundamental weakness, the standing source of criticism, of the school system. The aim has been as far as possible to deaden the walls to the sounds of life. When the distinction between the proper function of a hospital and a school is fully understood, we may say with Mirabeau: "La revolution, c'est accomplie!"—*Journal of Education*.

SUGGESTIONS FOR SCHOOL DECORATION.

BY MISS MARY O. POLLARD,
Los Angeles, Cal.

During the last year I have had the privilege of visiting several schools in five different states, from New England to California, and have found some rooms so interesting and pleasant that I will gladly pass on a few of my impressions to other teachers.

In a Nevada school where Indians are many in the neighborhood was a corner of a primary room set apart for Indian curios. Here were pictures of noted Indians, baskets for the papoose, a drinking cup made from a gourd, bows and arrows, flint heads, and everything connected with Indian life and customs.

In another room in the same building was a Chinese corner, which included Chinese dolls, laundry bills, lanterns, fans, chop sticks and curiosities of every kind, such that I spent several minutes in just a casual survey of the collection.

In another place I was pleased to find in every room in the building, and there were about twenty, a United States flag at least five feet in length draped in a prominent place. Each of these was attached to a pole, which, being fastened to the wall at an angle of perhaps twenty degrees from the perpendicular, formed a convenient basis for a graceful drapery. In one room devoted to history were arranged smaller flags of most of the prominent nations of the world, which by their grouping showed to some extent the national alliance. In this same room was a colored map of

the religions of the world, which can be obtained, I think, from Flemming H. Revell Co., New York, for 40 cents. I find a very confused idea among students of the location and extent of the great religious beliefs of the world, and was impressed that this map would be an aid in obtaining a definite idea.

Another room was blessed with a succession of south windows, which were utilized for a row of beautiful window boxes filled with geraniums, smilax and ivy. Most of these rooms had dainty white sash curtains, but this teacher said that she had to choose between the curtains and flowers, and preferred the latter. So would any one who had seen her windows.

A room not far from the ocean had such a pretty corner draped with a fish net with the ropes and corks still connected and filled with starfish and shells. Another in a section where the long moss grows on the trees had an enormous branch arranged in a corner, which was made the receptacle for the nature study collections, paper owls and mistletoe and holly, for it was then Christmas time.

One day I happened to visit a room just as they were having a museum, and you would marvel to see the things of interest a 10-year-old boy can collect. Here were curios from every part of the world, from Chinese slippers and coffee berries and a French coin of Napoleon's time to a piece of rope with

which some noted criminal was hung and a lock of Lincoln's hair. Such an exercise requires judgment on the part of the teachers, but it is exceedingly instructive.

All of these that I have mentioned are inexpensive. It needs only interest and thought and care. The most beautiful room I ever visited, however, was one which can be duplicated by very few, though imitated by many. It was the room used by Prof. George, of the high school at Newton, Mass., for his English recitations. For perhaps six feet from the floor the walls were lined with a coarse canvas of a natural brown tint. On this were fastened so close together as to nearly hide the walls completely, pictures, etchings, engravings and photographs, collected on his many travels, and to add still more to the in-

terest he had written upon each an appropriate quotation culled from his reading. The room was ideal in its scholarly atmosphere, and withal showed plainly the individuality of the teacher.

Many of these suggestions may be used only in a modified form in most schools, but a little study will enable every teacher to make her room attractive and indicative of her own taste and ideals. Every section of country has some feature which may be worked up for decoration if it be only the birch bark and evergreens of the north and the moss of the south; and we all, I am sure, can look back to our own school days and know how much we were interested and influenced by the surroundings of the school room.—*The Progressive Teacher*.

THE PHILIPPINE SCHOOLS.

BY WALTER J. BALLARD,
Schenectady, N. Y.

Education is a chief—if not the chief—factor in the work of civilization. We may carry to other races our most improved methods of working and living, our labor-saving appliances, our system of self-government and all the other blessings of twentieth century civilization, but without education as a preliminary they will only tend to make the alien discontented. We must, by education, first teach him his need of those blessings, and then how to apply them.

Under ex-Governor Allen, Governor Hunt and Dr. M. G. Brumbaugh, a grand work in education in Porto Rico has been done and is being increasingly done. With equal force we can say the same of the educational work in Cuba, under Governor Wood and Lieutenant Matthew E. Hanna, but neither in Porto Rico nor Cuba are there such gigantic and difficult problems to solve along this line as those with which Governor Taft, the Philippine Commission, and Dr. Fred W. Atkinson are so ably grappling in the Philippines.

Starting in November, 1900, with only one clerk and one interpreter, Dr. Atkinson now directs and inspires the work of

800 American teachers, with 4,000 native assistants, among an enrollment of 160,000 scholars. That is a great work and a great beginning, but it is only a tithe of what remains to be done among a restless, suspicious and many-tongued mass of 8,000,000 people.

Under Spanish domination it was made a study to prevent this people of many tongues learning Spanish, or any common tongue, for fear they might mingle with each other, discuss their common wrongs, and ultimately turn against their oppressors. This want of a common tongue immeasurably increases the difficulties to be faced by that best of all missionaries, the American school teacher.

Are those difficulties being successfully met? Let us refer to Dr. Atkinson's report of the work from July 1, 1901, to September 30, 1901. After graphically describing the arrival and placing, inside thirty days, of the 572 American teachers who arrived there last summer, the report goes on to say:

"The American teachers were warmly welcomed. Many towns are still begging for them. No more women teachers can

be utilized, owing to the want of suitable living accommodations, but two or three hundred American young men, well trained and of good character, and willing to endure some discomfort and hardship, can be use to good advantage. For these position eight or nine thousand applications are on file. The teachers are directly responsible to their respective division superintendents.

"From April 10 to May 10, 1901, a normal term for the teachers of the islands was conducted in Manila, under City Superintendent David P. Barrows, aided by forty American teachers. About 600 native teachers were in attendance at the examinations for teachers' positions in the schools of Manila, May, 1901, held daily for two weeks. There was an average attendance of one hundred and twenty-five. Many of these students had never studied the English language before entering. Many had had years of experience in teaching under Spanish rule, but had to be taught from the text books now used in the public schools of Manila. Others were young men and women who had been studying English in the night schools of the city. This increases the work, teaching the teachers to teach the scholars.

"History is taught from the biographical standpoint, and that is found to be the most successful way of teaching it, owing to the natural interest in great characters, and the possible simplicity of wording. The object is to teach United States history from the social and political side, explaining and teaching the modes of government, the growth of institutions, our manners and customs, so as to effect improvement in the home life and citizenship. All necessary branches of study are taught, and in addition, science, art and music.

"The Manila trade school, under Ronald P. Gleason, is also in operation, teaching mechanical drawing, cabinet-making, plumbing and printing. At the time of writing the report (October, 1901), the agricultural school was on the eve of being opened under Mr. Gerow D. Brill, of the United States Department of Agriculture, with a comprehensive and practical scheme of work.

"Throughout the archipelago teachers of English are required to devote four hours daily to the instruction of children in the English language and the common branches. The native teachers receive at least one hour a day instruction in English and American school methods. This is being supplemented as rapidly as possible by vacation training schools in each province, pending the establishment of more normal schools outside of Manila. The native teachers are eager for this instruction.

"Many towns have asked for and received evening schools taught by the American teachers. The attendance at such schools is very good, and the better and more ambitious class of people attend—clerks, translators, prospective teachers or commercial employees.

"Since July 1, 645 teachers of English have gone to their stations; the full quota of division superintendents have been actively engaged in organizing and supervising the elementary schools; the regular normal school has been opened with an attendance of 250 students. The department has moved into better quarters; the office force has been entirely reorganized. There are probably over 150,000 Filipino pupils enrolled in the free primary schools established by the American government, and over 75,000 pupils in daily attendance.

"There are nearly 4,000 elementary Filipino teachers, one-half of whom are receiving one hour of English instruction daily. There are at least 10,000 adults receiving English instruction in the evening schools conducted by American teachers, and the number will shortly increase to from twenty to thirty thousand. Large orders are being placed with American firms for school material. Great interest is shown by Filipinos at large in educational matters, and the eagerness for English instruction before reported is still unabated."

Viewing these results for humanity's good in the Philippines, and familiar, as we are, with the results in Porto Rico and Cuba, can it be truly said that the Spanish-American war was in vain?—*The Educational Gazette.*

BOOK REVIEWS.

Any volume noticed will be sent prepaid, upon receipt of the price, by A. W. Mumford, 203 Michigan Avenue, Chicago, Ill.

ALPHONSE DAUDET—SELECTED STORIES.

This work was prepared for class use by T. Atkinson Jenkins, professor of the French language and literature in Swathmore College. It includes six of Daudet's most popular stories, noteworthy for their literary finish, wholesome atmosphere and wealth of idiom. All furnish that "lively, realistic narrative with plenty of dialogue," recommended by the Committee of Twelve for elementary reading. The book contains a portrait of Daudet, and maps of France, of Paris and of Le Nivernais. The notes explain all historical allusions as well as difficult grammatical points, and the vocabulary has received especial attention, to make it accurate and complete. (50 cents. American Book Company, New York and Chicago.)

BIRDS AND NATURE—VOLUME XI.

At the present time no library is at all complete unless there are found on its shelves a large complement of Nature books. Though "Birds of Nature" is issued as a magazine during ten months of the year, it is so planned that when the two volumes of the year are bound they form instructive and beautiful books. A complete set will materially add to the value of any library, and will be found a constant source of pleasure in the home reading circle. Each volume is profusely illustrated with colored pictures taken from Nature by the three-color process of photography. Twenty of the forty pictures in Volume XI. are those of birds. Among them are exquisite humming birds, bright warblers, birds of prey and game birds. The whale, the cat, the cow, the horse and sheep are also pictured. These will be found of value in the kindergarten, and the articles that accompany them are very instructive. An interesting feature is the series of illustrations of our well-known gem stones. The series is continued from Volume X. These pictures show the gems in their natural condition and color, and is completed by a picture of the twelve birthstones. This was taken directly from genuine gems, and represents a value of several hundred dollars. The descriptive and historical articles accompanying these gem pictures were written by Dr. Oliver Cummings Farrington, of the Field Columbian Museum. There are also

beautiful pictures of wild flowers, and Dr. Albert Schneider, of the Northwestern University, has written five instructive articles to accompany the illustrations of economic plants. In the editing great care has been taken in order that nothing which could convey a wrong impression of Nature should be found in the printed pages or in the pictures. Nature poetry and stories form a pleasing feature. (\$1.50. A. W. Mumford, Chicago.)

BUSINESS EDUCATION.

This little booklet contains an address, delivered before the Council of Superintendents of New York, by Edward L. Stevens, superintendent of the Borough of Queens. Professor Stevens shows very clearly that a proper elementary and secondary school training is the foundation of a business education. A business man must be concise and act quickly on a given subject. As a means of training the child the author advises the use of mental and oral arithmetic. These tend to cultivate the child's analytic ability and its power to mentally project quantities, values and relations. The address is both instructive and interesting and should be read by all who are teaching children. (15 cents. C. W. Bardeen, Syracuse, N. Y.)

DAUDET'S TARTARIN DE TARASCON.

This edition of one of the most popular and widely known of Daudet's delightful stories, presents the adventures of the illustrious tartarin in attractive form for school use. All the passages that did not seem suitable for the class room have been eliminated, and the needs of teachers and pupils have been kept constantly in view. The reading of the story is sure to prove interesting as well as useful. The notes supply explanations of all difficult points, and a complete vocabulary, containing all irregular forms of verbs, has been added. The editor of this work is Prof. C. Fontaine, of the DeWitt Clinton High School, New York City. Dr. Fontaine was until recently the director of Roman language instruction in the high schools of Washington, D. C. (45 cents. American Book Company, New York and Chicago.)

DER PROZESS AND EINER MUSZ HEIRATEN.

These two plays are among those recommended for elementary reading by the Modern Language Association of America. They are excellent examples of the brief comedy, replete with fun and sprightliness. They furnish practice in colloquial expressions, and will be of great help in teaching the idioms of the language. The notes explain difficult points, and the vocabulary is complete. Exercises for re-translations, based on the text, afford materials for thorough drill in German prose composition. (30 cents. American Book Company, New York and Chicago.)

GRADED CLASSICS—FIRST READER.

There is no merit in making the way to literature harder than it really is. There is no good reason why the pilgrim on the road to heaven of letters should not have a little foretaste of what's coming to encourage him along the way. This new First Reader says to the pupil, "Come with me," and it takes him by the hand and leads him gently along a way so smooth, and so full of sunshine and sweet foretastes of the paradise of literature to which he is going, that he will never know just where the pilgrimage ends and paradise begins. This is its strong point—its strongest point: it does not force a child into literature; it tempts him into it; and it tempts him into it by awakening in him a love for reading at the very moment he is learning to read. It is not assumed that the only business of a reader is to teach a child to read. The author who assumes that is likely to make a reader that will teach the child to despise reading. The aim of the Graded Classics is to teach the child to read *in a way that will develop in him a love for reading*, and everything is made to bend to this end.

It is for this reason that this First Reader has been made the easiest of all the readers that have been made. In its 143 pages of reading one will find but 493 different words. In no other book, we believe, will be found so few words doing service over so great a space. Moreover, all this space is filled with genuine reading matter. There is no padding.

The book was built in full view of the school room. Every sentence was tested in the light of experience. All the features of the "word" and so-called "sentence" methods that have been retained have been retained because they have proved themselves worthy to live. It is a survival of the fittest. These features are supplemented by careful phonic drills. All through the book everything that is placed before the child is of the sort that arouses interest. He gets pleasure out of every word. There is nowhere a meaningless sentence. (30 cents. B. F. Johnson Publishing Company, Richmond, Va.)

GRADED CLASSICS—SECOND READER.

The Second Reader is composed entirely of classics. There is no made-to-order nature talk, but what is far better, there are opportunities along the way for talks about nature from the teacher himself. It is not a book of botany or zoology; it is a book of literature; and nature talks, such as disfigure many readers, are not literature.

The grading in this reader is as accurate as in the first book. No lesson contains more than eight new words. The 493 words used in the First Reader are placed in the beginning of the Second, thus giving the teacher an opportunity to review the First before entering upon the Second. (35 cents. B. F. Johnson Publishing Company, Richmond, Va.)

MOSER'S DER BIBLIOTHEKAR.

This edition of "Der Bibliothekar" is edited by William A. Cooper, assistant professor of German in the Leland Stanford, Jr., University.

The English version of this play, under its title of "The Private Secretary," has won a host of friends in this country. There is no local coloring, and hence it is easy of comprehension by American pupils. Its genuine humor stimulates the student's interest in the text, and it has proved a favorite wherever used in schools. The language, while offering no great difficulties, gives an acquaintance with colloquial German which is most helpful. The notes furnish all needed help and the vocabulary is complete, affording explanations of constructions and idioms. (45 cents. American Book Company, New York and Chicago.)

SCIENTIFIC SLOYD.

Anna Molander gives in "Scientific Sloyd" a new original system founded on geometrical principles. Sloyd is defined and its history related. The text treats of the aims of sloyd; how to prepare the walls of a sloyd room and properly equip it with benches and tools. The book is prepared for use in teachers' colleges, and for primary, elementary and grammar schools. (50 cents. C. W. Bardeen, Syracuse, N. Y.)

SONGS OF THE WESTERN COLLEGES.

All the world loves the college student, and under no circumstances is he more amiable or more provocative of contagious geniality than when he sings his college songs.

For many years the western colleges have been singing their college songs unnoticed. Horace Gillette Lozier, University of Chicago, and Richard Walton Tully, University of California, the compilers, have endeavored to secure all of these songs and place them in a book which would not only reveal these native Western songs to the East, but give to the Western colleges a book containing all the songs familiar to their alumni as well as to the undergraduates.

Many of the old favorite songs are included. This was done at the request of very many alumni and alumnae, who wished to have some means of living over again their happy college days in the old familiar songs, with their sweet memories of alma mater. (\$1.25. Hinds & Noble, New York.)

THE TAYLOR SCHOOL READERS. FIRST READER.

This readers, prepared by Frances Lilian Taylor, is a beautiful book. The illustrations are so well chosen and arranged that they cannot fail to interest a child, and thus assist it in learning to read. "In preparing the various lessons, the author's chief care has been to present such matter as is based upon the child's instinctive interests; hence the choice of subjects has been influenced by the character of the reading which children select when left to themselves." Many of the new words are introduced by the use of nursery rhymes that are so often memorized by children. There are many excellent features in this attractive reader. (25 cents. Werner School Book Company, New York and Chicago.)

Educational Articles in the May Magazines.

"Nature Poetry of Byron and Shelley," Prof. Pelham Edgar.....	<i>Canadian Magazine</i>
"The Development of China," F. Lynwood Garrison.....	<i>Cassier's Magazine</i>
"For Civic Improvement," Sylvester Baxter.....	<i>Century</i>
"How the Birds Build Their Nests," Neltje Blanchan.....	<i>Ladies' Home Journal</i>
"Recollections of Stonewall Jackson," Edward M. Alfriend.....	<i>Lippincott's Magazine</i>
"Financial System of Japan," Count M. Matsukata.....	<i>North American Review</i>
"The Opportunity of the United States," Andrew Carnegie.....	<i>North American Review</i>
"The Proposed American Art College in Rome," James McMillan.....	<i>North American Review</i>
"The Qualities That Make a Merchant Great," Robert C. Ogden.....	<i>Success</i>
"Impressions of the Philippines," Edmund B. Briggs.....	<i>The American Catholic Magazine</i>
"Higher Commercial Education," J. Laurence Laughlin.....	<i>The Atlantic Monthly</i>
"The Diplomatic Service of the United States," Louis E. Van Norman.....	<i>The Chautauquan</i>
"Formative Incidents in American Diplomacy," Edwin Erle Sparks.....	<i>The Chautauquan</i>
"Browning's Treatment of Nature"—II, Stopford Brooke.....	<i>The Critic</i>
"Revival of Celtic Literature," Ian J. McGarvey.....	<i>The Era</i>
"Wage-Earning School Children in England," Thomas Burke.....	<i>The Forum</i>
"The Example of French Industrial Art Schools," J. Schoenhof.....	<i>The Forum</i>
"The Question of Greatness in Literature," W. P. Trent.....	<i>The International Monthly</i>
"Misunderstood Children," Elizabeth Harrison.....	<i>The Pilgrim</i>
"Hygiene of the Nervous System," Julia Holmes Smith, M. D.....	<i>The Pilgrim</i>
"Richly Endowed Stanford University," Will Irwin.....	<i>The World's Work</i>
"President Jordan of Stanford University," F. B. Millard.....	<i>The World's Work</i>
"Does Industrialism Kill Literature?" C. Alphonse Smith.....	<i>The World's Work</i>

INDEX.

Volume VII—June, 1901, to May, 1902, inclusive.

	PAGE		PAGE
Agriculture as a Science for the Elementary Schools. Joseph Carter.....	52	Book, Our First School. Carrie Sivyver Ferris	199
Alphabet, Do Children Know The. William Warner Bishop and Frank A. Manny.....	356	Botany, Outline of. Robert Greenleaf Leavett	359
Anarchy and the Public Schools. M. Vincent O'Shea	146	Busy Bee, The New. J. F. Kinsey.....	159
Arithmetic. Robert J. Aley.....	235	Child, The—A Study in the Evolution of Man. Alexander F. Chamberlain.....	39, 317
Arithmetic, Lessons to be Learned from Experience in Teaching, to the Blind. Frank H. Hall.....	65	Child, The Story of a. Pierre Loti. Translated by Caroline F. Smith.....	79
Art and Education. John E. Clarke.....	19	Child Stories from the Masters. Maud Menefee	318
Art Unresponsiveness, Cause and Cure Of. Charles De Garmo.....	53	Childhood, The Psychology of. Frederick Tracy	319
Artists in the Schoolroom, American. G. D. C.	150	Children, Concerning. Charlotte Perkins Gilman	36
Barnard—Bardeen	94	Chinaman as We See Him, The. Ira M. Condit	279
Blackbird, The Red Wing (Color Illustration)	145	Christian Religion, History of the. C. V. Waite	159
Blue Bird, The (Color Illustration).....	106	Civics, A Manual of. C. W. Bardeen.....	359
Bluejay, The. Edward B. Clark (Color Illustration)	75	Civics, Practical. George Chandler.....	38
BOOK REVIEWS (WITH AUTHORS' NAMES).		Classical Characters, One Thousand. Ivory Franklin Frisbee	37
Algebra, Academic. William J. Milne....	36	Colomba. A. Guyot Cameron.....	77
America's Story for America's Children. Mara L. Pratt.....	77	Comfort and Exercise. Mary King.....	36
America, The Social Spirit in.....	358	Construction Work. Edward F. Worst..	77
Anatomy, Physiology and Hygiene, Elementary. Winfield Scott Hall.....	119	Country Life, Stories of. Sarah Powers Bradish	359
Ancient Peoples, Stories of.....	120	Daudet, Alphonse—Selected Stories. Edited by T. Atkinson Jenkins.....	392
Animal Life, Studies of. Herbert E. Walters, Warrallo Whitney, F. Colby Lucas.	38	David, The Boy Harper. Annie E. Smalley	36
Animal World, Stories and Tales from the. Emma M. C. Greenleaf.....	38	Dickens as an Educator. James L. Hughes	77
Arithmetic, Advanced School. John M. Colaw and J. K. Elwood.....	38	Discovery of the Old Northwest, The. James Baldwin	120
Arithmetic, An Intermediate. Ella M. Pierce	318	Drawing, Augsburg's—Book I.....	318
Arithmetic, Graded Work in—7th Year. S. W. Baird.....	238	Earth, Sky and Air in Story—Book I. W. H. Niedlinger	158
Arithmetic, Natural. Isaac O. Winslow..	80	Education, Business. Edward L. Stevens..	392
Arithmetic, New Practical. Eugene L. Dubbs	279	Education, History of. Mary M. Conway..	119
Arithmetic, Primary School. John M. Colaw and J. K. Ellwood.....	38	Education, New Methods in. J. Liberty Tadd	37
Arithmetic, The New Higher. A. W. Rich.	39	Education, The Foundation of. Levi Seeley	239
Bean, Life of a. Mary E. Laing.....	37	Educational Biography, A Dictionary of. C. W. Bardeen.....	158
Bibliothekar, Moser's Der.....	393	Educational Nuggets. J. R. Howard.....	36
Birds, A, B, C Book of. Mary Catherine Judd	158	El Capitan Veneno. D. Pedro A. de Alarcon, Edited by George G. Brownell.....	118
Birds and Nature—Volume X. William K. Higley, Editor.....	198	English Grammar, An. James M. Milen..	118
Birds and Nature—Volume XI. William K. Higley, Editor.....	392	English Words. Edwin Watts Chubb....	238
Birds of Lakeside and Prairie. Edward B. Clark	158	Era, The New. E. O. Butterfield.....	39
Birds of Song and Story. Elizabeth and Joseph Grinnell	158	Esther in Maine. Flora Longfellow Turknnett	36
Birds, The Jingle Book of. Edward B. Clark	159	Europe, Northern	360
Blackboard, Plain Uses of the. Wilbur F. Crafts	78	Fable, In the Misty Realm of. Emma Robinson Kleckner	37
		Federal State, The American. Roscoe Lewis Ashley	358
		Flowers, A Guide to the Wild. Alice Lounsberry	118
		Flowers, Springtime. Ruth Norcross....	159
		Forest Trees in Photogravure, Typical....	38

	PAGE
Geography, Lessons in Physical. Charles R. Dryer	238
Geometry, Elements of Plane. Alan Sanders	78
Geschichten Von Deutschen Stadten. Menco Stern	319
Government, Civil. Edward Schwinn and W. Wesley Stevenson	36
Grammar, Practical Studies in. Samuel W. Norton	38
Grand Canyon, In and Around the. George Warton James	78
Greeks, Four Old. Jennie Hall	319
History, A Brief Topical Survey of United States. Oliver P. Cornman and Oscar Gerson	77
History, Leading Facts of English. D. H. Montgomery	37
History of the American People, A. Frances Newton Thorpe	36
History of the United States, A. Allen C. Thomas	77
History of the United States, A Primary. John Boyd McMaster	118
History, Stories from English. Henry P. Warren	238
Hygiene, Oral Lesson Book. Henrietta A. Merick	37
Indian Chieftains, Stories of. Mary Hall Husted	38
Jean Mitchell's School. Angelina W. Wray	279
Julius Caesar—The XXth Century Shakespeare. Edited by Cyrus Lawson Hooper ..	80
Kindergarten, What is a. George Hansen ..	40
King of the Golden River, The. Edited by Eloise McVay	200
Latin Composition. Anna Cole Mellick ..	319
L'Enfant de la Lune. Edited by Edith Healy	279
Le Voyage de M. Perrichon. Edited by G. Costegnier	279
Literature Series, Standard (46 Volumes) ..	119
Little Nell, The Story of	159
Lolami, The Little Cliff-Dweller. Clara Kern Bayliss	37
Merchant of Venice, The. Edited by Frederick Manley	79
Mind Reading, Exercise in. Catherine Aiken	119
Mother Goose, The Tales of	239
Musz Hieraten, Einer	393
Myths, Classic. Mary Catherine Judd ..	319
Nature's Miracles. Elisha Gray	37
Opera Stories, Wagner. Elizabeth Harrison	239
Ovid—Selected Works. Edited by Frank J. Miller	78
Perry Pictures, The	39
Pestalozzi. A. Pinloche, Edited by Nicholas Murray Butler	199
Physical Culture. B. F. Johnson	38
Pieces for Every Occasion. Caroline B. Le Row	38
Plant Life, First Studies in. Dr. Atkinson ..	36

	PAGE
Poems and Stories, A Graded List of	198
Primer of Work and Play, A	318
Primer, The Arnold. Sarah Louise Arnold	200
Prozess, Der	393
Puppet Crown. Harold MacGrath	37
Reader, First. Francis Lilian Taylor	394
Reader, First and Second—Graded Classics ..	393
Readers, Graded Literature—Books I—VIII	199
Readers, New Educational—Book III. A. J. Demarest and William H. Van Sickle ..	119
Readers, New Educational—Book IV	159
Reading and Composition, How to Teach. J. J. Burns	119
Republic, The Foundations of the	239
Robinson Crusoe—Heath's Home and School Classics	159
School Year, The Second. Henrietta M. Lilly	39
Shakespeare Studies—Macbeth. Edited by Charlotte Porter and Helen A. Clark ..	319
Sloyd, Scientific. Anna Molander	393
Social Control. Edward A. Ross	279
Songs of the Western Colleges	393
Spanish Grammar, A. Samuel Garner	118
"Spelling, Our Accursed"—What to Do With it	199
Spencer, Herbert, and His Critics. C. V. Waite	199
Springtime and Flowers. Mae Ruth Norcross	119
Stories of My Four Friends, The. Margaret Andrews Allen	79
Stories, Old World Wonder. M. Vincent O'Shea	238
Story Reader, The. Alfred E. Logie and Claire H. Necke	80
Strange Peoples. Frederick Starr	78
Systematic Methodology. Andrew Thomas Smith	78
Tartarin De Tarascon, Daudet's	392
Teachers, The Education of. W. H. Payne ..	79
Teaching, Errors in Science. C. Stuart Gager	119
Teaching, White's Art of. Emerson E. White	239
Thinking and Learning. J. B. Schaeffer ..	39
Transfiguration of Miss Philura, The. Florence Morse Kingsley	39
Trees, A Guide to the. Alice Lounsberry ..	118
Trees, Stoke's Ten Common	360
Une Semaine A Paris	239
Virgil, The Aeneid of—Book I. Archibald A. Maclardy	39
Ward's Letter Writing and Business Forms	160
Wigwam Stories. Mary Catherine Judd ..	40
Wilderness Ways. William J. Long	40
Wood Folk, Ways of. William J. Long ..	40
World, The Wide	360
Biological Analogies, The Danger of Using, in Reasoning on Educational Subjects. W. T. Harris	383
Books, Free School. Elisha Benjamin Andrews	248
Business Education, What Constitutes a. L. O. Crissy	72

	PAGE
Child Life as Recorded in History. Nina C. Vanderwalker.....	375
Child-Study and Education. Dr. James Sully	5
Child-Study, The Ideal School as Based on. G. Stanley Hall.....	88
Children Break Down in School, Why. Philo F. Chase.....	296
Children, Give the, a Chance. N. Coe Stewart	57
Children's House, The Evolution of the. M. H. Burgess.....	299
Children Know the Alphabet, Do. William Warner Bishop and Frank A. Manny....	355
Children, The Sleep of.....	231
Children, What Can be Done for, Who Never Get Beyond the Grammar School. William H. Benedict.....	264
College, High School and Attendance at. James Russell Parsons, Jr.....	58
College Presidency, The need of Training for the. Frank Pierrepont Graves.....	272
Commerce, Schools of.....	136
Composition, English. J. M. Greenwood....	353
December, Things to See in. Julia E. Rogers	196
Decoration, Suggestions for School. Mary O. Pollard.....	389
Dictionary, Using the.....	198
Discipline. Clarence F. Carroll.....	303
Doctrine of Election, The. Henry Sabin....	100
Donors, The Rights of. Alton B. Parker....	216
Economics in the Public Schools. George Gunton	54
Economic Teaching, Ideals and Methods of. Frederick W. Spiers.....	60
Editorial Comment	1, 41, 81, 121, 161, 201, 241, 281, 321, 361
Education, A Great New Movement in. Walter H. Page.....	21
Education, A New Work in.....	22
Education, Commercial.....	221
Education, Egoism and Altruism as Organic Factors in. Arnold Tompkins.....	12
Education, Federal and State Interest in Higher. Robert B. Fulton.....	55
Education, Five Evidences of an. Nicholas Murray Butler.....	166
Education, Hidden Forces in Life and. M. Vincent O'Shea	327
Education, Method and Content in. George Alfred Brown	181
Education of the Young American Farmer, The. W. M. Beardshear.....	220
Education, Our Chaotic. Paul H. Hanus....	336
Education, Progress in. John L. Spalding..	62
Education, Science of, Its Present Aspect and Outlook. Francis W. Parker.....	95
Education that Counts, The.....	234
Education, The Ideal. Francis W. Parker....	143
Education, The Moral Element in. W. H. Faunce	66
Education, What Constitutes a Business. L. O. Crissy.....	72
Educational Articles in the Magazines....	34, 40, 120, 160, 200, 240, 280, 320, 360, 394
Educational Association, The Southern. Mary Hall Leonard	276

	PAGE
Educational Expansion. Elmer E. Brown....	55
Educational Influence of the Exposition, The. Nicholas Murray Butler.....	103
Educational Meetings.....	26
Educational Statistics of States and Leading Cities.....	312
Educational Value of Play, The. John E. Bradley	226
Enemy, An. A. E. Winship.....	15
English, The Teaching of. James H. Harris	70
Fads, What Are. W. A. Whiting, Louis Soldan and William K. Fowler.....	112
Farmer, The Education of the Young American. W. M. Beardshear.....	220
Floral Emblem, Our National. Edna Dean Procter.....	50
Forestry, The Place the Subject of, Should Occupy in High School Instruction. J. Gifford	192
Garden, Going to School in a.....	197
Geographic Exposition, The Des Moines....	310
Geography in the Elementary Schools, The Place of. W. T. Harris.....	206
Geography, Industrial. Philip Emerson....	188
Geography Teaching in the Grades, Plans of. Superintendent Spaulding.....	186
Geography, Teaching of. G. Stanley Hall....	103
Geography, The Relation of, to other Science Subjects. William Harmon	
Girls, Education for. Jeannette Winter Hall	369
Norton	68
Goldfinch, The (Color Illustration).....	107
Greek in Secondary Schools. Isaac N. Judson	58
Handwork, How early may, be Made a Part of School Work. Charles R. Richards	59
Hearing, Some Results of. D. R. McMillan	64
High Schools and Attendance at College. James Russell Parsons, Jr.....	58
High School Course, Freedom in the. Edwin G. Dexter.....	305
Hinsdale's "Art of Study," Some Texts from. G. W. Mickens.....	236
History in the High School Course, The Place of American. Herbert Eugene Bolton	170
History, Place of General, in the Schools....	265
Home, The Relation of the, to the Preparatory School. Endicott Peabody....	260
Hugo—His Centenary and His Interesting Childhood. Kenyon West	286
Inspiration in the Schools, The Element of. Andrew S. Draper.....	253
Instruction in the Public Schools, Individual. John Kennedy.....	212
Kindergarten and the School, The. W. N. Hamilton	8
Kindergarten, The Mission of the. Sarah L. Arnold	297
Kingfisher, The (Color Illustration).....	185
Latin, Aims and Methods of Studying. F. R. Moulton.....	51

	PAGE
Libraries, School. Alfred Bayliss.....	18
Library and the School as Co-ordinate Forces in Education, The. Livingston McCartney	65
Library, the Public: Its Purposes and Possibilities. William H. Brett.....	288
Library, The School and the. Frederick M. Cranden.....	69
Life and Education, Hidden Forces in. M. Vincent O'Shea.....	327
Literature by Grades, Lights to.....	30
Literature in the Schools. A. B. Dick.....	102
Lory, The Blue Mountain. (Color Illustration)	225
Manual Training as a Socializing Factor. Richard G. Boone.....	350
Manual Training, Creative. Grant Beebe.....	256
Manual Training in Relation to Trade Schools. Virgil G. Curtis.....	61
Manual Training in the High School. Gilbert B. Morrison.....	60
Maps, Relief. Silvan Plumly.....	191
Meadowlark, The. (Color Illustration)...	24
Mistakes, Some of Our. George M. Grant.	63
Moral Element, The.....	233
Mot Mot, Mexican. (Color Illustration)...	184
Museum Extension, The Movement for. Richard Waterman.....	115
Museums, The Educational Value of Natural History. Frank Collins Baker.....	155
Music, The Relation of, to Life.....	68
Nature, Concerning.....	195
Normal Schools, What the, Can Do for the Teachers from the Library Side. Irene Warren	73
Nature, The Love and Study of—A Part of Education. G. Stanley Hall.....	129
Oriole, The Baltimore. (Color Illustration)	76
Parker, Colonel Francis Wayland. Rev. John L. Spalding.....	366
Philippine Schools, The. Walter F. Ballard.	390
Physiography. W. H. Snyder.....	63
Plagiarism, C. W. Bardeen Confesses....	32
Plants and Their Environment. N. M. Fenneman	223
Play, The Educational Value of. John E. Bradley	226
Play, Work and. Alice H. Putnam.....	357
Primary Grades, Household Occupation in. Katherine B. Camp.....	138
Psychology and Class Instruction. Edward Franklin Buchner.....	178
Pupils, Talk to High School. Charles W. Eliot	247
Robin, The. (Color Illustration).....	24
Roller, The Swallow-tailed Indian. (Color Illustration)	144
Schools, Anarchy and the Public. M. Vincent O'Shea.....	146
School and Society, The. John Dewey....	31
School Announcements, Summer.....	28
School Government, Co-operative.....	142
School Rivalry. J. B. Mowry.....	304
School, The Graded—Its Strength and Its Weakness. Joseph Rosier.....	175

	PAGE
School, The Relation of the Home to the Preparatory. Endicott Peabody.....	260
School Work, The Use of Current Events in. Francis B. Atkinson.....	388
School Yard, The Evolution of a. Susan Huntington Hooker.....	302
Schoolhouse, The Ideal. William H. Burnham	16
Schools, Are the, Doing What the People Want Them to Do? John Dewey.....	10
Schools, Country. James Greenwood....	20
Schools, Ideal Public. Andrew S. Draper.	3, 110
Schools, University Trained Teachers for Grammar	155
Science Teachers, A Plea for the Study of Educational Philosophy on the Part of. N. A. Harvey.....	52
Sleep of Children, The.....	231
Social Science and the Curriculum. George E. Vincent	45
Stanford, The Educational Ideals of Le-land. David Starr Jordan.....	149
Student, The Religion of a College. Francis G. Peabody.....	136
Supervisor's Opportunities, The. Laura Fisher.....	380
Teacher as a Social-Economic Power, The.	70
Teacher, The Personality of the.....	232
Teacher, The Personality of the. Helen L. Grenfell	152
Teacher, Wanted—A. James H. Canfield..	11
Teachers, The Future of Woman. A. E. Winship	292
Teacher's Work, The. Samuel Hamilton.....	378
Teaching as a Business for Men.....	183
Teaching, Method in Science. Louis Mur- bach.....	346
Teaching Narrowing, Is. Albert Leonard.	23
Textile Arts as Constructive Work, The. Clara Isabel Mitchell.....	71
Trades, Education for the. Charles F. Warner	54
Trade Schools, Manual Training in Relation to. Virgil G. Curtis.....	61
Training for the College Presidency, The Need of. Frank Pierrepont Graves....	272
Trees and Nature Study. Julia E. Rogers.	25
Truant Schools, Value of. Mrs. Dwight Goss	72
Truth, Act the. Andrew S. Draper.....	356
Truth, What Is. Henry S. Prickett.....	331
University and College Education in the United States, The Trend of. William R. Harper	342
University, Function of the. R. H. Jesse..	56
Wages, Plain Words on Teachers'. Wil- liam McAndrews.....	267
Woodpecker, The Red-Headed. (Color Illustration)	224
Work and Play. Alice H. Putnam.....	357
Work and Play in Adolescence. M. Vin- cent O'Shea.....	108
Work and Play in the Grades. Charlotte H. Powe.....	108
Work and Play, Necessary Elements in, and Practical Consequences. C. Gerald- ine O'Grady.....	62

Beautiful Pictures, Catchy Verse

The Jingle Book of Birds

By EDWARD B. CLARK

16 Colored Plates

Price 60 Cents

ADOPTED FOR TOWNSHIP LIBRARIES IN
WISCONSIN

This book is for both Children and the elders. The
lines are not jingles merely but jingles which have
a well rounded purpose and much of pith and point.
The color scheme of the cover is strikingly beautiful.
This book will make an appropriate Christmas gift.

Read what the Chicago Record-Herald critic says of the book :

"The Jingle Book of Birds," by Edward B. Clark, has the triple merit of being handsome, clever and reliable. Mr. Clark is one of the most thorough and enthusiastic ornithologists in Chicago, and has for years been a contributor to magazines and to the local press on the subject of birds. Instead of writing the customary "alphabet" he has preferred to be guided by the real nature of the birds, rather than by the letter with which each name begins, and has treated only those birds of which something pointed could be said. There are sixteen spirited "jingles" and the same number of full-page colored illustrations of typical birds, the pictures being unusually fine examples of three-color work. The book is an excellent one to put in the hands of children. Here is an example of Mr. Clark's jingles, taken from the one devoted to "the bluejay, a rascally thief," which closes thus:

It is queer how the people have made it a rule
That to call a man "jay" is to call him a fool,
For if they believe that the jay is a dunce
They'll find themselves fooled if they try him just once."

—Chicago Record-Herald, Nov. 23, 1901.

The Chicago Evening Journal says, after quoting from the jingles at length:

"Sixteen beautiful illustrations in colors—magnificent full-page picture—show the varied and wonderful plumage of some of Mr. Clark's feathered friends. Opposite each picture is a descriptive verse in big type. For children or young folks, or even for adults. 'The Jingle Book of Birds' is a very pretty possession. Mr. Clark deserves to be complimented on producing such a dainty and pleasing volume."

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago,

"Standard" Water Colors

Are those which are based on the six Standard Colors of the Solar Spectrum, and are made by

MILTON BRADLEY CO., Springfield, Mass.
New York Atlanta Philadelphia San Francisco

HERE ARE A FEW OF OUR BOXES

No.	Price	No.	Price
A1. A large decorated box containing eight pans of semi-moist colors, six Standards, Warm and Cool Gray, one brush, per box . . .	.25	10. Photograph Colors. A box of eight colors, the six Standards, Brown and Chinese White, one brush. These colors are especially prepared for the coloring of photographs, half-tone prints, maps, lantern slides, etc., per box . . .	.25
1. A decorated box containing eight pans of semi-moist colors, six Standards, Warm and Cool Gray, one brush, per box . . .	.35	11. A large enameled box containing ten pans of artist's semi-moist colors for High Schools. Assorted to order. One brush, per box . . .	.50
6. A decorated box containing eight dry cakes, six Standards, Warm and Cool Gray, one brush, per box . . .	.25	12. Same as No. 11 except that the colors are limited to five pans. Per box . . .	.30
8. A decorated box containing four large cakes, Red, two Yellows and Blue, two brushes. These colors are made especially for those who wish a three-color outfit. Per box . . .	.20	13. A large enameled box containing four pans of semi-moist colors, Red, two Yellows and Blue, one brush. These colors are prepared for those who wish a semi-moist three-color outfit. The colors are same as those in the cakes of No. 8. Per box . . .	.20
9. Set of nine tubes of moist colors in paper box. Six Standards, Warm and Cool Gray and Lamp Black, per set . . .	.90		

Twenty-six moist Colors in Tubes - - Price per Tube, 10 Cents

SEND FOR FULL PRICE LIST

Quick Work at Long Distance.

University of Wyoming.—(Special delivery letter.)—There is a vacancy at the head of the business department. Man wanted April 1. President Smiley thinks you do not have such men, but has consented to let me notify you. The salary is \$1,200. He is going to Omaha and other places. If you have a good man you had better have him telegraph.—Prof. Frank H. H. Roberts (who went there through this agency in 1899), March 22, 1901. (Received March 24.)

Telegram.—Can you take commercial department University of Wyoming twelve hundred, begin April first? Telegraph.—To Principal W. B. Carhart, Coeymans, N. Y., March 24

Telegram.—Can take commercial department University of Wyoming, begin April first, twelve hundred.—Mr. Carhart, March 25.

Telegram.—Can send immediately Carhart, graduate Albany normal, has taught Albany business college, now principal, good man, thirty-four years, married, fine penman, all right.—To President Smiley, March 25.

Telegram.—Come on trial, hundred dollars month, expenses one way, wire answer.—President Smiley, March 25.

Telegram.—President Smiley wires come on trial, expenses one way. Advise acceptance.—To Mr. Carhart.

Telegram.—Advise me regarding trial, for how long.—Mr. Carhart, March 26.

Telegram.—Consider appointment same as permanent. Naturally for rest of school year though not specified. They take more risk than you. Salary one hundred a month. If you can do the work you will stay.—To Mr. Carhart, March 26.

Telegram.—Shall probably start for Laramie some time Thursday.—Mr. Carhart, March 26.

Telegram.—Carhart telegraphs he will start Thursday.—To President Smiley, March 26.

Telegram.—Send man to Coeymans to-day to take my place. I go to-morrow.—Mr. Carhart, March 27.

Telegram.—Guy Bailey, Cortland graduate, two years experience, will reach you today.—To Mr. Carhart, March 27.

The School Bulletin Agency

C. W. BARDEEN, Syracuse, N. Y.

\$1,500 Guaranteed Yearly

To high class man or woman, with chance for promotion and advanced salary, to have charge small office at home or in home town, to attend to correspondence, advertising and other work. Business of highest order and backed by solid men financially and politically. A great opportunity for the right person. Enclose self-addressed stamped envelope for full particulars to WALTER B. REDMAN, GENERAL SUPERINTENDENT, Corcoran Building, Opposite United States Treasury, WASHINGTON, D. C.

Herewith my check for \$10 for which please send to me the five double volumes, one-half morocco, BIRDS AND NATURE, as noted on your letter paper. I am delighted with the volumes received to-day.

HATTIE B. L. BROWN.

Jackson Sanatorium, Danville, N. Y., May 3, 1902.

BIRDS AND NATURE sent by express has arrived in good order. I am more than pleased with the book. The artistic coloring of the BIRDS, the descriptive matter and the substantial binding, merit the highest commendation.

MISS L. CHESHIRE HOYT.

New Canaan, Conn., May 5, 1902.

Enclosed find 50 cents for which please send me the beautiful Bird Calendar for 1902.

HARRY F. FENCH.

Oak River, Man., April 11, 1902.

Clark's Jingle Book of Birds \$.60
Clark's Birds of Lakeside and Prairie . . 1.00
Grinnell's Birds of Song and Story . . 1.00

Do they sell? Yes.

Please ship to us via Goodrich boat 100 each of

Clark's Jingle Book of Birds,
Clark's Birds of Lakeside and Prairie,
Grinnell's Birds of Song and Story.

DESFORGES & CO.

Milwaukee, Wis., April 30, 1902.

Enclosed find check for \$. which together with 20 per cent cash discount is payment of your bill of May 1st.

DESFORGES & CO.

Milwaukee, Wis., May 3, 1902.

A-B-C BOOK OF BIRDS

—BY—

MARY CATHERINE JUDD.

With Nonsense Rhymes for the Little Ones
and Prosy Sense for Older Ones. \$1.

"Resplendent in bright red binding, and with two beautifully executed bird portraits in natural colors on the outside covers, this bird book is of exceptional attractiveness and worth. The pages measure almost eight by eleven inches. Twenty-six superbly printed color half-tones of bird life are accompanied each by two pages of reading matter—one a very clever jingle, the other a compact prose statement of interesting and instructive information about the bird, his habit, and his haunts, Mothers, teachers and young folks will all find choice material here."—*Sunday-School Times*.

A. W. MUMFORD, Publisher,

203 Michigan Avenue, CHICAGO.

OF BIRDS of SONG and STORY \$1.

Birds of Song and Story. By Elizabeth and Joseph Grinnell. The authors are well known lovers of birds and have written much of interest about bird life, giving their own observations. They have carefully studied the haunts of their feathered friends and are acquainted with the folklore and legends relating to birds. The birds who receive special attention in this book are the robin, mocking bird, cat bird, hermit thrush, grosbeak, oriole, canary, sparrow, yellow bird, bluebird, tanager, meadow-lark, skylark and bobolink. Besides interesting chapters on these birds, the authors describe the female birds at meeting time and relate some legends, one of them giving the origin of the birds. Teachers will find "Birds of Song and Story" a desirable book to read to their pupils. There is a great deal of information about the habits of birds contained in the volume.—*Utica Press*.

Enclosed find \$2.00 for articles mentioned in your special offer. Please send me sets of the lumbering pictures in place of * * * * I have confidence in your house and indeed you have always filled my orders satisfactorily.

MAY HENRY.

London, O., April 28, 1902.

A B C Book of Birds.

By MARY CATHERINE JUDD.

A Book for Children, both large and small, price \$1.00.

Miss Judd, in this, has prepared a book that will be a delight to every child and will be intensely interesting to every adult lover of birds. Every letter of the alphabet is illustrated by a beautiful colored picture of a bird, whose name begins with that initial. A fun-provoking rhyme given, with each picture for the children, a short prose description makes them interesting to the adult. Miss Judd, principal of one of the public schools in Minneapolis, is already well known as author of "Classic Myths" and "Wigwam Stories."

Mary Catherine Judd has written an A B C book of birds, which contains twenty-six as handsome colored plates of as strikingly plumaged birds as it is possible for the color photographic art to produce. The first illustration is that of a fine specimen of the great bald eagle backed by the American flag. To make the bird fit the first letter of the alphabet it is called, as rightly it should be, the American bald eagle. Among the other birds shown are the gorgeous flamingo, the resplendent cardinal, the ruby-throated hummer, the great diving loon, the familiar meadowlark, and the practically extinct wild pigeon. Miss Judd has given a catching little rhyme with each bird, as well as an accurate prose description of the bird and its habits. The color scheme of both covers is beautiful. The bluejay adorns the front of the book, while the cardinal, as natural as life, lends his beauty to the back. No better child's book can be found.—*Chicago Record-Herald*.

The "A B C Book of Birds" is designed for children, large or small, with nonsense rhymes for little ones and prosy sense for older ones. Every letter in the alphabet is represented by a bird, beginning with the American bald eagle and ending with the zoo-zoo, or mourning dove. There is a jingle for each bird and the author then tells in prose some interesting facts about the bird represented. The book is an instructive as well as pleasant one for children, who can learn therefrom many things about birds. The same publisher has issued a very attractive bird calendar for 1902, which sells for 50 cents.—*Utica Press, New York*.

Photographs of birds in natural attitudes and colored in exact imitation of the real colors of the feathers, and combinations of colors peculiar to our wild songsters, are the features which recommend the "A B C of Birds" to the little folks. It is hardly enough to say that the pictures reflect life, for they are so remarkably good. Mary Catherine Judd, the sponsor of the book, has written nonsense rhymes for the little ones and prosy sense for older ones. The paragraph intended for the grown-ups gives the Latin and common names of the bird, something about its habits and its home. The nonsense rhyme begins with the letter of the alphabet, and jingles the words together in a way which children love to hear.—*Chicago Evening Post*.

This "A B C Book of Birds," as its title indicates, is a volume treating of birds, and primarily intended for children. The order of the alphabet is followed in the selection of birds for description. Thus the letter A represents the American bald eagle, B the bluejay, C the cardinal grosbeak, and so on throughout the alphabet.

The descriptions are in rhymes of from one to five stanzas, easily comprehended and memorized by the child. Each of these descriptions also acquaints the child with some of the most prominent characteristics of the bird described. Moreover, each description is accompanied by a full page illustration of the bird described, the illustration faithfully reproducing the form, coloring, and, whenever possible, the size also of the bird.

For children this volume is not only exceedingly attractive but also instructive. At the same time that the alphabet is being learned the memory is being exercised as the rhymes by repetition are being committed, and the rhymes almost unconsciously familiarize the child with the principal characteristics of the birds described.

And the book is not without its adaptation to older people, for each illustration and child's rhyme is followed by a page paragraph giving a more technical description for maturer intellects.—*Denver Post*.

For the very little ones Miss Mary Catherine Judd has prepared, and A. W. Mumford of Chicago has published, "The A B C Book of Birds." The illustrations in color are marvels of the lithographer's art, presenting the various birds in all the brilliancy of their coloring, and in surroundings, as to color, true to life. Each illustration is accompanied by a few lines of verse for the child, while on the opposite page is a paragraph in prose giving the scientific name of the bird and a few lines of scientific information about them which will help the grown-ups to explain the pictures more intelligently to the little ones.—*Minneapolis Journal*.

A. W. MUMFORD, PUBLISHER,

203 MICHIGAN AVE., CHICAGO.

ORDER BLANK.

BIRDS AND NATURE PICTURES

In Natural Colors. Size, 7x9 inches.

PRICE. Assorted as desired, two cents each; one cent each if one or more subscribers to BIRDS AND NATURE or REVIEW OF EDUCATION are sent at the same time.

SPECIAL OFFERS. (1) 75 plates (our selection) and BIRDS AND NATURE, one year, \$2.00. (2) 75 plates with REVIEW OF EDUCATION, \$1.50. (3) The complete set, 504 plates, 1 cent each, \$5.04. Send for catalogue for further information. Mark pictures desired and return this sheet. A. W. MUMFORD, 203 Michigan Ave., Chicago.

Date.....

I enclose..... for which please send the following order to

Name,.....

Street,.....

P. O.

State,

- | | | |
|----------------------------------|--------------------------------------|--------------------------------|
| 1 Nonpareil. | 52 American Mockingbird. | 102 White-fronted Goose. |
| 2 Resplendent Trogon. | 53 Black-crowned Night Heron. | 103 Turnstone. |
| 3 Mandarin Duck. | 54 Ring-billed Gull. | 104 Belted Piping Plover. |
| 4 Golden Pheasant. | 55 Logger-head Shrike. | 105 Wild Turkey. |
| 5 Australian Parrakeet. | 56 Baltimore Oriole. | 106 Cerulean Warbler. |
| 6 Cock of the Rock. | 57 Snowy Owl. | 107 Yellow-billed Tropic Bird. |
| 7 Red Bird of Paradise. | 58 Scarlet Tanager. | 108 European Kingfisher. |
| 8 Yellow-throated Toucan. | 59 Ruffed Grouse. | 109 Vermilion Flycatcher. |
| 9 Red-rumped Tanager. | 60 Black and White Creeping Warbler. | 110 Lazuli Bunting. |
| 10 Golden Oriole. | 61 American Bald Eagle. | 111 Mountain Bluebird. |
| 11 American Blue Jay. | 62 Ring Plover. | 112 English Sparrow. |
| 12 Swallow-tailed Indian Roller. | 63 Mallard Duck. | 113 Allen's Hummingbird. |
| 13 Red-headed Woodpecker. | 64 American Avocet. | 114 Green-winged Teal. |
| 14 Mexican Mot Mot. | 65 Canvas-back Duck. | 115 Black Grouse. |
| 15 King Parrot. | 66 Wood Duck. | 116 Flamingo. |
| 16 American Robin. | 67 Anhinga, or Snake Bird. | 117 Verdin. |
| 17 American Kingfisher. | 68 American Woodcock. | 118 Bronzed Grackle. |
| 18 Blue-mountain Lory. | 69 White-winged Scoter. | 119 Ring-necked Pheasant. |
| 19 Red-winged Blackbird. | 70 Snowy Heron, or Little Egret. | 120 Yellow-breasted Chat. |
| 20 Cardinal, or Red Bird. | 71 Osprey. | 121 Crowned Pigeon. |
| 21 Bluebird. | 72 Sora Rail. | 122 Red-eyed Vireo. |
| 22 Barn Swallow. | 73 Kentucky Warbler. | 123 Fox Sparrow. |
| 23 Brown Thrasher. | 74 Red-breasted Merganser. | 124 Bob-white. |
| 24 Japan Pheasant. | 75 Yellow Legs. | 125 Passenger Pigeon. |
| 25 Bobolink. | 76 Skylark. | 126 Short-eared Owl. |
| 26 American Crow. | 77 Wilson's Phalarope. | 127 Rose Cockatoo. |
| 27 Flicker. | 78 Evening Grosbeak. | 128 Mountain Partridge. |
| 28 Black Tern. | 79 Turkey Vulture. | 129 Least Bittern. |
| 29 Meadow Lark. | 80 Gambel's Partridge. | 130 Bald Pate Duck. |
| 30 Great Horned Owl. | 81 Summer Yellow Bird. | 131 Purple Finch. |
| 31 Rose-breasted Grosbeak. | 82 Hermit Thrush. | 132 Red-bellied Woodpecker. |
| 32 Canada Jay. | 83 Song Sparrow. | 133 Sawwhet Owl. |
| 33 Purple Gallinule. | 84 Yellow-billed Cuckoo. | 134 Black Swan. |
| 34 Smith's Longspur. | 85 Ruby-throated Hummingbird. | 135 Snowy Plover. |
| 35 American Red Crossbill. | 86 House Wren. | 136 Lesser Prairie Hen |
| 36 California Woodpecker. | 87 Phoebe. | 137 Black Duck. |
| 37 Pied-billed Grebe. | 88 Ruby-crowned Kinglet. | 138 Wilson's Petrel. |
| 38 Bohemian Waxwing. | 89 Mourning Dove. | 139 Blue-Gray Gnatcatcher. |
| 39 Long-billed Marsh Wren. | 90 White-breasted Nuthatch. | 140 American Coot. |
| 40 Arizona Jay. | 91 Blackburnian Warbler. | 141 Ivory-billed Woodpecker. |
| 41 Screech Owl. | 92 Gold Finch. | 142 American Sparrow Hawk. |
| 42 Orchard Oriole. | 93 Chimney Swift. | 143 Silver Pheasant. |
| 43 Marsh Hawk. | 94 Horned Lark. | 144 Scaled Partridge. |
| 44 Scissor-tailed Flycatcher. | 95 Yellow-bellied Sapsucker. | 145 Ovenbird. |
| 45 Black-capped Chickadee. | 96 Warbling Vireo. | 146 American Three-toed Wood- |
| 46 Prothonotary Warbler. | 97 Wood Pewee. | pecker. |
| 47 Indigo Bird. | 98 Snow Bunting. | 147 Bartramian Sandpiper. |
| 48 Night Hawk. | 99 Junco. | 148 Nightingale. |
| 49 Wood Thrush. | 100 Kingbird. | 149 Roseate Spoonbill. |
| 50 Catbird. | 101 Summer Tanager. | 150 Dickcissel. |
| 51 Yellow-throated Vireo. | | |

- 151 Dusky Grouse.
- 152 Eggs, First Series.
- 153 South American Rheas.
- 154 Bay-breasted Warbler.
- 155 Black-necked Stilt.
- 156 Pintail Duck.
- 157 Double Yellow-headed Parrot.
- 158 Magnolia Warbler.
- 159 Great Blue Heron.
- 160 Eggs, Second Series.
- 161 Brunnich's Murre.
- 162 Canada Goose.
- 163 Brown Creeper.
- 164 Downy Woodpecker.
- 165 Old Squaw Duck.
- 166 White-faced Glossy Ibis.
- 167 Arkansas Kingbird.
- 168 Eggs, Third Series.
- 169 Wilson's Snipe.
- 170 Black Wolf.
- 171 Red Squirrel.
- 172 Prairie Hen.
- 173 Butterflies, First Series.
- 174 Gray Rabbit.
- 175 American Ocelot.
- 176 Apple Blossoms.
- 177 Wilson's Tern.
- 178 Coyote.
- 179 Fox Squirrel.
- 180 Loon.
- 181 Butterflies, Second Series.
- 182 American Red Fox.
- 183 Least Sandpiper.
- 184 Mountain Sheep.
- 185 American Herring Gull.
- 186 Raccoon.
- 187 Pigmy Antelope.
- 188 Red-shouldered Hawk.
- 189 Butterflies, Third Series.
- 190 American Gray Fox.
- 191 Gray Squirrel.
- 192 Pectoral Sandpiper.
- 193 King Bird of Paradise.
- 194 Peccary.
- 195 Bottle-nosed Dolphin.
- 196 Tufted Puffin.
- 197 Butterflies, Fourth Series.
- 198 Armadillo.
- 199 Red-headed Duck.
- 200 Golden Rod.
- 201 Prairie Sharp-tailed Grouse.
- 202 Brown and Red Bat.
- 203 American Otter.
- 204 American Golden Plover.
- 205 Moths.
- 206 Canadian Porcupine.
- 207 Caspian Tern.
- 208 Flowering Almond.
- 209 African Lion.
- 210 Cacti.
- 211 Flying Squirrel.
- 212 Hummingbirds.
- 213 Silkworm.
- 214 California Vulture.
- 215 American Goldeneye.
- 216 Skunk.
- 217 Chimpanzee.
- 218 Puma.
- 219 Medicinal Plant: Lemon.
- 220 American Mistletoe.
- 221 Nuts.
- 222 Whippoorwill.
- 223 Snapping Turtle.
- 224 Sandhill Crane.
- 225 Medicinal Plant: Ginger.
- 226 Crab-eating Opossum.
- 227 Geographic Turtle.
- 228 White Ibis.
- 229 Iris.
- 230 Duck-billed Platypus.
- 231 Cape May Warbler.
- 232 The Coconut.
- 233 Tufted Titmouse.
- 234 Northern Hare.
- 235 Pineapple.
- 236 Hooded Merganser.
- 237 Medicinal Plant: Cloves.
- 238 Common Ground Hog.
- 239 Common Mole.
- 240 Azalea.
- 241 Medicinal Plant: Nutmeg.
- 242 American Barn Owl.
- 243 Kangaroo.
- 244 Hoary Bat.
- 245 Nashville Warbler.
- 246 English Grapes.
- 247 Swift Fox.
- 248 Hyacinth.
- 249 Cedar Waxwing.
- 250 Hyrax.
- 251 Medicinal Plant: Coffee.
- 252 Bonaparte's Gull.
- 253 Common Baboon.
- 254 Grinnell's Water Thrush.
- 255 Hairy-tailed Mole.
- 256 Cineraria.
- 257 A Feather Changing from Green to Yellow.
- 258 Western Yellow-throat.
- 259 Myrtle Warbler.
- 260 Blue-winged Yellow Warbler.
- 261 Golden-winged Warbler.
- 262 Mourning Warbler.
- 263 Chestnut-sided Warbler.
- 264 Black-throated Blue Warbler.
- 265 Pointer Dog.
- 266 Shells.
- 267 Marbles.
- 268 Ores.
- 269 Minerals.
- 270 Water Lilies.
- 271 Yellow Perch.
- 272 Beetles.
- 273 Forests.
- 274 Grand Canon.
- 275 Terraced Rocks, Yellowstone Park.
- 276 Rooster and Hen.
- 277 Oil Well.
- 278 Polished Woods.
- 279 Brook Trout.
- 280 Niagara Falls.
- 281 Purple Ladies' Slipper.
- 282 Medicinal Plant; Tea.
- 283 Towhee.
- 284 Canary.
- 285 Carolina Paroquet.
- 286 Chipmunk.
- 287 Peach.
- 288 Common Minerals and Valuable Ores.
- 289 Narcissus.
- 290 Medicinal Plant: Coca.
- 291 Red-tailed Hawk.
- 292 Maryland Yellow-throat.
- 293 Lyre Bird.
- 294 Cowbird.
- 295 Wild Cat.
- 296 European Squirrel.
- 297 Virginia Rail.
- 298 Blue-winged Teal.
- 299 Yellow-headed Blackbird.
- 300 Black Squirrel.
- 301 Weasel (Ermine).
- 302 Medicinal Plant; Quince.
- 303 Quartz.
- 304 Lily of the Valley.
- 305 Killdeer.
- 306 Cinnamon Teal.
- 307 Clapper Rail.
- 308 Gopher.
- 309 Mink.
- 310 Carbons.
- 311 Medicinal Plant; Licorice.
- 312 Yellow Ladies' Slipper and Painted Cup.
- 313 Peacock.
- 314 Willow Ptarmigan.
- 315 Stellar's Jay.
- 316 Ruddy Duck.
- 317 Muskrat.
- 318 Medicinal Plant; Poppy.
- 319 Primrose.
- 320 Copper and Lead Ores.
- 321 American Bittern.
- 322 Scarlet Ibis.
- 323 Massena Partridge.
- 324 Ring-billed Duck.
- 325 Medicinal Plant; Thyme.
- 326 Bloodroot.
- 327 Western Blue Grosbeak.
- 328 Shells.
- 329 Magpie.
- 330 Red-breasted Nut-hatch.
- 331 Purple Martin.
- 332 Ring-necked Dove.
- 333 Opossum.
- 334 Genista.
- 335 Medicinal Plant; Digitalis.
- 336 Raven.
- 337 Wilson's Thrush.
- 338 Red or Wood Lily.
- 339 Common Sunfish.
- 340 A Mountain River.
- 341 Insects.
- 342 Brittany - (Cows).
- 343 Harvesting in the Great Northwest.
- 344 Homing Pigeon.
- 345 Swamp Rose Mallow.
- 346 Yellow Ladies' Slipper.
- 347 } New England Aster.
- 348 } Late Purple Aster.
- 349 Wild Yellow or Canadian Lily.
- 350 Vesper Sparrow.
- 351 Calico Baze.
- 352 Mountain Lake.
- 353 Fruit: Banana.
- 354 Oswego Tea or Bee Balm.
- 355 } Fringed Gentian.
- 356 } Closed or Bilad Gentian.
- 357 } Tall or Giant Sunflower.
- 358 } Black-eyed Susan or Oxyeye Daisy.
- 359 Wild Columbine.
- 360 American Redstart.
- 361 Trout.
- 362 Ocean Waves.
- 363 Domestic Fowls.
- 364 Western Willet.
- 365 Buffle-Head.
- 366 American Eared Grebe.
- 367 Louisiana Tanager.
- 368 Luna and Polyphemus Moths.
- 369 Prong-horned Antelope.
- 370 Sensitive Plant.
- 371 Medicinal Plant; Almond.
- 372 Western Horned Owl.
- 373 Long-crested Jay.
- 374 Fulvous Tree-duck.
- 375 Red-breasted Sapsucker.
- 376 Promethean and Secropian Moths.
- 377 Irish Setter.
- 378 Pitcher Plant (Nepenthes).
- 379 Medicinal Plant; Mandrake.
- 380 Hawk Owl.
- 381 Knot or Robin Snipe.
- 382 White-winged Crossbill.
- 383 Townsend's Warbler.
- 384 Water Shells.
- 385 Collared Lizard.
- 386 Fruit: Apple.
- 387 Medicinal Plant; Vanilla.
- 388 American Rough-legged and Young Red-tailed Hawks.
- 389 Short-billed Dowitcher.
- 390 Great-tailed Grackle.
- 391 Hooded Warbler.
- 392 Land Shells.
- 393 Gila Monster.
- 394 Medicinal Plant; Cassia Cinnamon.
- 395 Fruit: Pomegranate.
- 396 Owl Parrot.
- 397 Gray Parrot.
- 398 White Pelican.
- 399 Marbled Murrelet.
- 400 Black Bear.
- 401 Pond and River Shells.
- 402 Fruit: Orange.
- 403 Medicinal Plant; Pepper.
- 404 Crested Curassow.
- 405 Harlequin Duck.
- 406 Canada Grouse.
- 407 Dovekie.
- 408 Beaver.
- 409 Marine Shells.
- 410 Fruit: Lemon.
- 411 Medicinal Plant: Cabebe.
- 412 Audubon's Oriole.
- 413 Marbled Godwit.
- 414 Rusty Blackbird or Grackle.
- 415 Surf Scoter.
- 416 American Elk.
- 417 Nautilus Shells.
- 418 Flowers: Mountain Laurel.
- 419 Trailing Arbutus.
- 420 Medicinal Plant: Hops.
- 421 Bullock's Oriole.
- 422 Sanderling.
- 423 Great Northern Shrike.
- 424 Brandt's Cormorant.
- 425 Buffalo.
- 426 Agates.
- 427 Flowers: Great Mullein.
- 428 Moth Mullein.
- 429 Medicinal Plant: Cocoa Fruit.

425 Anna's Hummingbird
 426 Rufous Hummingbird
 427 White-throated Sparrow
 428 Parula Warbler
 429 Tournelline
 430 Indian Elephant
 431 Walrus
 432 Bengal Tiger
 433 Yellow-bellied Flycatcher
 434 Olive-sided Flycatcher
 435 Tree Sparrow
 436 Black-throated Green Warbler
 437 Beryl
 438 African Lion
 439 Alaskan Moose
 440 Polar Bear
 441 Pine Grosbeak
 442 Field Sparrow
 443 Carolina Wren
 444 Black-poll Warbler
 445 Turquoise
 446 Striped Hyena

447 Giraffe
 448 Miriki Spider Monkey
 449 White-eyed Vireo
 450 Rivoli Hummingbird
 451 Worm-eating Warbler
 452 Chipping Sparrow
 453 Topaz
 454 Rhesus Monkey
 455 Asiatic or Bactrian Camel
 456 Zebra
 457 Golden-crowned Kinglet
 458 King Rail
 459 Brown-headed Nuthatch
 460 Sharp-shinned Hawk
 461 Quartz
 462 Greenland Whale
 463 Bur or Spear Thistle and Pas-
 ture or Fragrant Thistle
 464 Irish Moss
 465 Blue-headed Vireo
 466 California Thrasher
 467 Broad-tailed Hummingbird

468 Broad-winged Hawk
 469 Quartz
 470 Domestic Cat
 471 Soapwort or Bouncing Bet and
 Snake-head or Turtle-head
 472 Sugar Cane
 473 Winter Wren
 474 Leconte's Sparrow
 475 Northern Phalarope
 476 Hairy Woodpecker
 477 Opal
 478 Purple Violet and Hepatica
 479 Sheep
 480 English Walnut
 481 Black-chinned Hummingbird
 482 Burrowing Owl
 483 Audubon's Warbler
 484 Red-backed Sandpiper
 485 Garnet
 486 Black Cohosh and Arrow Head
 487 Cows
 488 Sweet Flag

489 Green Heron
 490 Varied Thrush
 491 Short-billed Marsh Wren
 492 Prairie Warbler
 493 Birth Stones
 494 Horse
 495 Robin's Plantain and Blue
 Vervain
 496 Medicinal Plant: Cotton

497 Swallow tailed Kite
 498 Alice's Thrush
 499 Carolina Chickadee
 500 Violet-green Swallow
 501 Starfish
 502 "Old Faithful" Geyser
 503 Sea or Marsh Pink and Fire-
 weed
 504 Medicinal Plant: Tobacco

A SET INCLUDING ONE OF EACH OF THE ABOVE

504 PICTURES FOR \$5.04.

Order some of these Pictures for Bird Day and Arbor Day.

A. W. MUMFORD, PUBLISHER,

203 Michigan Ave., Chicago.

I enclose draft for \$12.00 for which please send me the five double volumes **BIRDS AND NATURE** half morocco bound, and the unbound numbers following them up to and including June, 1903.

Denver, Colo., April 15th, 1902.

DANIEL WITTER.

Enclosed find \$2.10 for which send **BIRDS AND NATURE** one year, ten back numbers and 60 colored pictures.

Moulmein, Burma, Asia, April 14, 1902.

SAW CHIN HTIN,
 Government High School.

GOLDEN PHEASANT.

18x24 inches; suitable for framing. Price, 25 cents.

This picture is made by color photography, the same as our regular **Birds and Nature** pictures. It is given as a premium to subscribers.

COLOR PORTRAIT OF GLADSTONE,

"The Grand Old Man," 18x24 inches. Price, 25 cents.

Also given as a premium with **Birds and Nature**. This is a very suitable picture for the schoolroom and is well worth framing.

PERRY PICTURES, 1c EACH.

We can fill your orders for these well-known and most excellent pictures at the same price and as promptly as if ordered from the publishers, and shall be pleased to receive your orders.

TYPICAL FOREST TREES IN PHOTOGRAVURE 9x12

First Series.

1. Black Oak.
2. White Pine.
3. American Elm.
4. Lombardy Poplar.
5. Tamarack.
6. Soft Maple.
7. Willow.
8. White Birch.

Second Series.

1. Red Oak.
2. Silver Leaf Poplar.
3. Hickory.
4. Hard Maple.
5. Fir Balsam.
6. White Ash.
7. White Cedar.
8. Beech.

Third Series.

1. White Oak.
2. Black Walnut.
3. Horse Chestnut.
4. Basswood or Linden.
5. Black Ash.
6. Butternut.
7. Locust.
8. Bitternut Hickory.

40 cents a Series; the Three Series, \$1.00, postpaid.

I heartily approve of the idea and think the photographs will do a great deal of good. The tree habit with trunk and leaf habit is admirable.

JOHN M. COULTER, Dept. of Botany, University of Chicago.

SIRS:—Enclosed please find a check for \$15.00, for which please forward copies of your publication. They are just what we need. Yours truly,

G. STRAUBENMULLER, Associate Superintendent, New York.

No teacher should be without a set of our Forest Trees.

Sample sent on request.

'RIGINAL RINEHART REPRODUCTIONS

From colored photographs, showing in detail the fantastic coloring, gaudy clothing, head dresses and ornaments of the following subjects:

- | | |
|--|--|
| 1 Chief Wolf Robe (Cheyenne) | 21 Chief Louison (Flathead) |
| 2 Chief Mountain (Blackfeet) | 22 Chief Josh (Apache) |
| 3 Hattie Tom (Apache) | 23 Chief Little Wound (Ogalalla) |
| 4 Chief Hollow Horn Bear (Sioux) | 24 Chief Black Man (Arapahoe) |
| 5 Chief Grant Richards (Tonkawa) | 25 Chief White Swan (Crow) |
| 6 Chief White Man (Kiowa) | 26 Chief Wets It (Assiniboine) |
| 7 Wichita Papoose | 27 Apache Papoose |
| 8 Sac and Fox Papoose | 28 A Pair of Broncho Busters |
| 9 Broken Arm on Horseback | 29 Two Little Braves |
| 10 Chief White Buffalo (Arapahoe) | 30 Black Man (Arapahoe) |
| 11 Eagle Feather and Papoose (Sioux) | 31 High Bear (Sioux) |
| 12 Ts-i-Do-We-Tsh-(Pueblo) | 32 Chief Red Cloud (Sioux) |
| 13 Brushing Against (Apache) | 33 Blue Wings (Winnebago) |
| 14 Kill Spotted Horse (Assiniboine) | 34 Chief Joseph (Nez Percés) |
| 15 Alice Lone Bear (Sioux) | 35 Chief Geronimo (Guyiatle) Apache |
| 16 Thunder Cloud (Blackfeet) | 36 Abane (Wichita) |
| 17 Three Fingers (Cheyennes) | 37 Chief Sitting Bull (Sioux) |
| 18 Chief Red Bear (Arapahoe) | 38 Annie Red Shirt (Sioux) |
| 19 Good Eagle (Sioux) | 39 Yellow Feather (Maricopa) |
| 20 Gov Diego Nalango, Santa Clara (Pueblo) | 40 Little Wound Chief (Ogalalla Sioux) |

Size, 7x9 inches

Price, 10 cents each

Any 12 for \$1.00 or the 40 for \$2.00

AS A SPECIAL OFFER

We will send you BIRDS AND NATURE one year and the above 40 pictures for \$3.00. The regular value is \$5.00.

BIRDS AND NATURE one year and 10 pictures, for \$1.70.

A. W. MUMFORD, Publisher

203 Michigan Ave., Chicago

Birds and Nature

Buy Books You Won't Outgrow

"Enclosed find Money Order for \$40 for which please send seven sets of the BIRDS AND NATURE magazines, and four sets of the colored pictures to Rev. Mariet Brothers, 153 E. 76th St., New York, N. Y., marked enclosure to France."

I like BIRDS AND NATURE the best of any magazine I have ever taken.
Fall River, Mass., March 9, 1902.

BROTHER HENRY, Laval College, Que.
HELEN G. SMITH.

One should buy books he will not outgrow. There has never been published before a series of nature and outdoor books to compare with these and they are of interest alike to young and old—the most popular gift and holiday books.

These books have cost over \$80,000 and were it not for the fact that the sales are large and increasing we could not make the following low prices :

Set of 11 volumes, cloth, containing 496 plates.....	\$11.00
Set of 5 double volumes, half morocco, containing 456 plates	10.00
The unbound magazines '97, '98, '99, 1900, 1901, 1902.....	6.00
The 504 colored plates	5.04

We always recommend the set of five double volumes, half morocco, \$10.00; the regular price is \$15.

A. W. MUMFORD, Publisher,

706 Pine Arts Building,

Chicago, Ill.

I enclose check for \$2.10, for which please send me BIRDS AND NATURE one year, ten back numbers, and the 60 pictures, according to your special offer.

I think you are doing a great work in helping the world to have higher conceptions of what education is. If I were able I would put the REVIEW OF EDUCATION in every Reading Room in our land and a copy of BIRDS AND NATURE in every home.

MRS. HATTIE B. L. BROWN.

Dansville, N. Y., April 28, 1902.

WANTED.---Back Numbers of Child-Study Monthly.

The following numbers of the Child-Study Monthly are desired by the publisher:

November-December '95, April '96, April '97, June-July '97, November 1900, March 1901.

Anyone sending us copies of these numbers will be credited two months on their subscription to the Review of Education for each number sent.

A. W. MUMFORD, PUBLISHER,

CHICAGO, ILL.

"THE BOOK OF THE PRESIDENTS"

By Gen. Charles H. Grosvenor,

Twenty years member of Congress. Pronounced the most sumptuous and magnificently beautiful book ever issued in the United States. Contains 27 large full-page Photogravure Portraits, reproduced from the best paintings in the White House, the Congressional Library, the Capitol Building and the Corcoran Art Gallery of Washington.

Contains Department of Autograph Letters, showing an autograph letter of each President of the United States and Department of Armorial Bearings and Genealogical Notes. These two features have never before appeared in any book ever issued.

Both President McKinley and President Roosevelt posed specially in the White House for their portraits to be used only and exclusively in this work. This is the greatest honor ever conferred on any publication ever issued in this country. This work reflects credit upon the Nation. Every patriotic American citizen will buy it. Sells at sight. Small fortunes being made by men and women and large fortunes will be made on this publication within the next three years. High class men and women employed on commission or part salary and part commission. \$1,500 guaranteed yearly. Also, Manager wanted to open small office at home or in home town, to have charge of agents and correspondence, look after the advertising and other work. Write for terms and circulars. Address

THE CONTINENTAL PRESS

Corcoran Building, Opposite U. S. Treasury
WASHINGTON, D.C.

BIRDIES.

A real gem. Teachers fall in love with it and pupils want to read it through as soon as they begin it. Appropriate for school and home.

It is the story of the experience of Delma and Harold who went to their grandfather's to spend the summer studying and observing the birds. Contents are:

BIRDIES AT THEIR TRADES: Mason—Swallow, Basketmaker—Crimsonfinch, Weaver—Oriole, Fuller—Goldfinch, Carpenter—Woodpecker, Tailor—Tailorbird.

BIRDIES AND THEIR SONGS: In the Garden—Robin, in the Wood—Thrush, in the Field—Bluebird, in the Sky—Lark, in the Home—Canary, in the Grove—Mockingbird.

BIRDIES ON THE WING: Hummingbird.

THE BIRDIES' FAREWELL: Jack Sparrow and Jenny Wren, Good-bye.

The book is very prettily illustrated by Bertha L. Corbett, the artist of Sunbonnet Babies. The author is Ida S. Elson, of Philadelphia, formerly a prominent Kindergarten of Bethlehem, Pa.

Flexible Binding, 25c.

Special prices for class use.

WM. G. SMITH & CO.,
Minneapolis, Minn.

I enclose \$5.04 for which please send me the 504 "Birds and Nature" pictures.

Henry M. Wirz.
Wallingford, Pa., Apr. 24, 1902.



I enclose \$5.04 for which kindly send me the complete set of "Birds and Nature" pictures.

Peter H. Smith.
Sioux City, Ia., May 8, 1902.



Please send me the set of 488 "Birds and Nature" pictures, for which you will find enclosed \$4.88.

Osmar Kuenne.
Medford, Wis., May 5, 1902.



Enclosed please find \$2.00 for which send me the three series of Forest Trees, \$1.00, the Literature Game, Game of Industries and Game of Birds, 75c, and 25 colored plates.

Porter H. Dale.
Island Pond, Vt., Apr. 28, 1902.



Enclosed find \$1.50 for renewal of my subscription to "Birds and Nature."

I have "Birds and Nature" from the time it was first started and derive much pleasure from it.

Homer C. Robbins.
Molalla, Ore., Apr. 23, 1902.

The Teacher's Journal....

A. Jones, Editor O. W. Ford, Bus. Mgr.

SPECIAL ANNOUNCEMENT FOR 1902-5

DR. D. W. DENNIS, Earlham College,	<i>Evolution and Nature Study</i>
FRANCIS M. STALKER, State Normal School,	<i>Psychology and Pedagogy</i>
AMOS W. FARNHAM, State Normal School, Oswego, N. Y.,	<i>Practical Geography</i>
J. E. McMULLAN, Marion Normal College,	<i>Literary Analyses</i>
WALTER W. STORMS, Former Editor Indiana School Journal,	<i>Great Educators and Miscellaneous</i>
SANFORD BELL, Clark University, Worcester, Mass.,	<i>Practical Pedagogy</i>
LOUIS J. RETTGER, State Normal School,	<i>Physiology</i>
J. L. MASSENA, Instructor in Drawing, Marion City Schools,	<i>Drawing in Public Schools</i>
JOHN B. WISELY, State Normal School,	<i>English Grammar</i>
ELIZABETH O. COPLAND,	<i>Methods in Reading and Geography</i>
CHAS. M. CURREY, State Normal School,	<i>High School Literary Studies</i>
ALONZO RICE,	<i>Poetry</i>
W. Y. WELCH, State Normal School, Clarion, Pa.,	<i>A Series of Articles on Arithmetic</i>
MARSHALL WILLIAMS, Attorney,	<i>School Law</i>
A. JONES, Marion Normal College,	<i>Grammatical Analysis and Arithmetic</i>

In addition to these writers, there will be numerous articles from Trustees, County Superintendents and Educators from the ranks of School teachers and City Superintendents.

SPECIAL FEATURES

1. The TEACHER'S JOURNAL is practical. It deals with the problems that confront the Teacher every day.
2. It has for its regular contributors, strong, practical instructors, who are in touch with the best modern methods in education. No educational periodical in the United States has a stronger staff of writers.
3. It is published *twelve months* in the year.
4. The State Board questions are answered with care and accuracy.
5. Especial attention is called to valuable contents of the JOURNAL for the past year. The next year promises improvement.
6. Before subscribing for any other periodical, see the TEACHER'S JOURNAL. It lives up to its title in the fullest sense.

Address The Teacher's Journal Company

\$1.00 PER YEAR

MARION, INDIANA

**WHAT \$1.00
WILL DO!**

The Mothers' Journal

\$1.00 Per Year Including Book

BABY

By Frances Sheldon Belton

A book to aid Young Mothers in the physical and mental development of their Children

The "Mothers' Journal" and the "American Boy," one year for One Dollar; the "Mothers' Journal" and "Little Folks," one year for One Dollar; the "Mothers' Journal" and "Ladies' World," one year for One Dollar; the "Mothers' Journal" and "Housekeeper," one year for One Dollar.

Our \$4.00 combination offer consists of the "Mothers' Journal," "Ladies' Home Journal," the "American Boy," "Saturday Evening Post," "Little Folks," and the "Ladies' World," all for one year for Four Dollars.

For Sample Copy—Address Postal

Mothers' Journal

NEW HAVEN, CONN.



BETWEEN



THROUGH PULLMAN SERVICE
BETWEEN CHICAGO AND



IF YOU ARE CONTEMPLATING A TRIP, ANY PORTION OF WHICH CAN BE MADE OVER THE CHICAGO AND ALTON, IT WILL PAY YOU TO WRITE TO THE UNDERSIGNED FOR RATES, MAPS, TIME-TABLES, ETC.

GEO. J. CHARLTON,
GENERAL PASSENGER AGENT,
CHICAGO, ILL.



Big Four ROUTE

TO

INDIANAPOLIS
CINCINNATI
LOUISVILLE
AND ALL POINTS

South and Southeast

THE SCENIC LINE TO

Virginia, Hot Springs, and Wash-
ington, D. C., via Chesapeake
& Ohio Railway

The only line from Chicago connecting in
the Central Union Depot, Cincinnati, with
trains of C. & O., L. & N., Q. & C., and B. & O.
S. W. Ry's.

City Ticket Office: 234 Clark Street
J. C. TUCKER, G. M. A.

To the Convention!

NATIONAL EDUCATIONAL ASS'N,
Minneapolis, Minn.

July 7-11,

VIA THE

CHICAGO,
MILWAUKEE & ST. PAUL
RAILWAY.

The World's Most Famous Train
"THE PIONEER LIMITED"

Runs Via

"THE ST. PAUL ROAD"

Route of the Government Fast Mail Train.

SEVEN PRINCIPAL ROUTES

between

CHICAGO AND MINNEAPOLIS.

Convention excursion tickets will be good going and returning via any of the above and several other attractive routes which afford a great variety of scenery, reach the most important towns in the Northwest, the Wisconsin "Lake Region," the "Dells" of the Wisconsin River, and include a three hundred mile trip along the Mississippi River.

Illustrated circular with time tables, maps and general information, including details as to excursion rates, dates of sale and other conditions, will be sent on application to

F. A. MILLER,
General Passenger Agent,
Chicago, Ill.

\$85.00

is all it will
cost for a trip through

YELLOWSTONE PARK

at the close of the

MINNEAPOLIS CONVENTION.

THE NORTHERN PACIFIC

makes a proposition that you cannot ignore. For \$85.00 they will sell you a ticket covering railway and Pullman fares, Dining car meals on trains, and hotel bills and stage coach transportation for the five and one-half days in the Park. The round trip will require about nine days from Minneapolis.

If a sufficient number go, a SPECIAL TRAIN of Pullman and Dining Cars will be placed at your disposal.

Send six cents for "Wonderland 1902," 25 cents for "Yellowstone National Park," and for any additional information write to F. H. FOGARTY, Gen. Agt., N. P. R., 208 So. Clark St., Chicago, or address

CHAS. S. FEE,
G. P. & T. A., N. P. R.,
ST. PAUL, MINN.

When a Teacher Invests Her Hard-Earned Money

In an educational magazine she wishes to subscribe for the one that will inspire her, help her in every-day work and keep her abreast of the educational times.

American Education

Is just that kind of magazine. Before subscribing, however, she should send for a free sample copy and note for herself how excellent are its many special features.

NEW YORK EDUCATION COMPANY

81 Chapel Street ALBANY, N. Y.

Tite Grip
Weaving
Needle...

The Strongest, Most Pliable
and Surest Needle yet
offered

For Kindergarten Weaving

Net Price per Dozen, 60c.

Kindergarten Material.

Lanes Liquid Color, The Best, Cheapest, Most Convenient Color
for Children's Use.

8-2 6z. Bottle, \$1.25.

J. L. HAMMETT COMPANY,

43-45 E. 19th Street, New York City.

116-120 Summer Street, Boston, Mass.

Having had a large number of
calls for

PORTRAITS of AUTHORS

the publishers of this paper have
caused to be made large
half-tone pictures of

Whittier and Longfellow

engraved in a superior manner,
and printed on heavy, selected
paper. They are especially
adapted for the schoolroom, the
size being 19 inches by 14 inches.

We offer these to teachers at 20c
each, securely packed in tubes
and delivered to any address.
Send all orders with remittance to

NEW ENGLAND PUBLISHING CO.

211-215 Pemberton Building
Pemberton Sq. BOSTON, MASS.

Birds of Song and Story

\$1.00.

FOR NATURE STUDENTS.

Some of the Most Familiar of American
Birds.

"'Birds of Song and Story' by Elizabeth and Joseph Grinnell (A. W. Mumford, Chicago), gives to the young lover of nature an introduction to the haunts, habits, notes and color of the common songsters. It gives also traditional stories connected with them, together with bits of sentiment and poetry relating to them. It is written in familiar conversational style, and is scientific without being weighted with heavy technical terms. It has many illustrations and the coloring is remarkably true to nature."—*Chicago Chronicle*.

A. W. MUMFORD, Publisher,
203 Michigan Avenue, CHICAGO.

...MISS... MARY CATHERINE JUDD'S NEW BOOK THE A-B-C OF BIRDS

"With nonsense rhymes for little
ones
And prosy sense for older ones."

The "nonsense rhymes" are catchy enough to please the older ones and the "prosy sense" so simply and neatly arranged that the little ones can understand it. Each picture has its appropriate rhyme, followed by a very brief paragraph condensing the most pertinent facts about the appearance and habits of the bird. The picture of the eagle, if we may believe Professor Lager, ought not to lead the flight. That bird is "the pirate of the air," he says, and he gives the hawk the preference as the more intelligent and seemingly in its habits.

The illustrations are admirably done, and the mechanical results all excellent. No prettier or more suitable decoration for a child's room could be desired than to take out these colored plates and use them for a frieze around the wall. They would solve the question of keeping the little ones happy and give them continual and unconscious training in the observation of our native birds.

This is a sensible, a timely, an attractive and a useful book, and Miss Judd has been very successful in her nonsense rhymes, which are by no means all nonsense, but often very dainty and neatly turned. In the present day of interest in these sprites of the woods and the air, Miss Judd's book is what might be called "very handy to have in the house," and would also be useful in kindergarten work.—*Minneapolis Sunday Times*, April 30, 1902.

A. W. MUMFORD, Publisher,
203 Michigan Ave.,
Chicago.

\$85.00

**IS ALL IT WILL COST FOR A TRIP
THROUGH**

YELLOWSTONE PARK

AT THE CLOSE OF THE

Minneapolis Convention

THE NORTHERN PACIFIC

makes a proposition that you cannot ignore. For \$85.00 they will sell you a ticket covering railway and Pullman fares, Dining car meals on train, and hotel bills and stage coach transportation for the five and one-half days in the Park. The round trip will require about nine days from Minneapolis.

If a sufficient number go, a SPECIAL TRAIN of Pullman and Dining Cars will be placed at your disposal.

Send six cents for "Wonderland 1902," 25 cents for "Yellowstone National Park," and for any additional information write to F. H. FOGARTY, Gen. Agt., N. P. R., 208 So. Clark St., Chicago, or address

CHAS. S. FEE, G. P. & T. A., N. P. R.

St. Paul, Minn.

Standard Literature for Schools

A Series of Choice Books for Class Reading and School Libraries.

AMERICAN HISTORY.

		List Price.	
		Paper.	Cloth.
Deerslayer (Cooper), No. 8	For 5th and 6th Years.	\$.20	\$.30
Dutchman's Fireside (Paulding), No. 44	For 6th and 7th Years.	.12½	.20
Grandfather's Chair (Hawthorne), No. 46	For 6th Year	.20	.30
Horse-Show Robinson (Kennedy), No. 10	For 6th and 7th Years.	.20	.30
Knickerbocker Stories (Irving), No. 23	For 7th and 8th Years.	.12½	.20
Last of the Mohicans (Cooper), No. 29	For 7th Year	.20	.30
Pilot (Cooper), No. 2	For 6th and 7th Years.	.20	.30
Spy (Cooper), No. 1	For 6th and 7th Years.	.12½	.20
Water Witch (Cooper), No. 27	For 7th Year	.20	.30
Westward Ho! (Kingsley), No. 33	For 7th and 8th Years.	.20	.30
Yemassee (Simms), No. 32	For 7th and 8th Years.	.20	.30

ENGLISH AND SCOTTISH HISTORY.

Harold (Bulwer-Lytton), No. 12	For 8th Year	.20	.30
Ivanhoe (Scott), No. 24	For 7th Year	.20	.30
Kenilworth (Scott), No. 7	For 6th and 7th Years.	.20	.30
Rob Roy (Scott), No. 3	For 6th and 7th Years.	.12½	.20
Tales of a Grandfather (Scott), No. 28	For 6th Year	.12½	.20

FRENCH, SPANISH AND ROMAN HISTORY.

Alhambra (Irving), No. 3	For 6th and 7th Years.	.12½	.20
Last Days of Pompeii (Thackeray), No. 38	For 7th Year	.20	.30
Ninety-Three (Hugo), No. 3	For 7th Year	.20	.30
Peasant and Prince (Martineau), No. 3	For 6th and 7th Years.	.20	.30

FOR PRIMARY GRADES.

Fairy Tales (For Second School Year), No. 39	For 2d Year	.12½	.20
Robinson Crusoe (De Foe), No. 25	For 3d and 4th Years	.12½	.20
Swiss Family Robinson (Wyss), No. 35	For 4th Year	.12½	.20
Wonder Book (Hawthorne) (4 stories), No. 16	For 4th Year	.12½	.20

FOR INTERMEDIATE AND GRAMMAR GRADES.

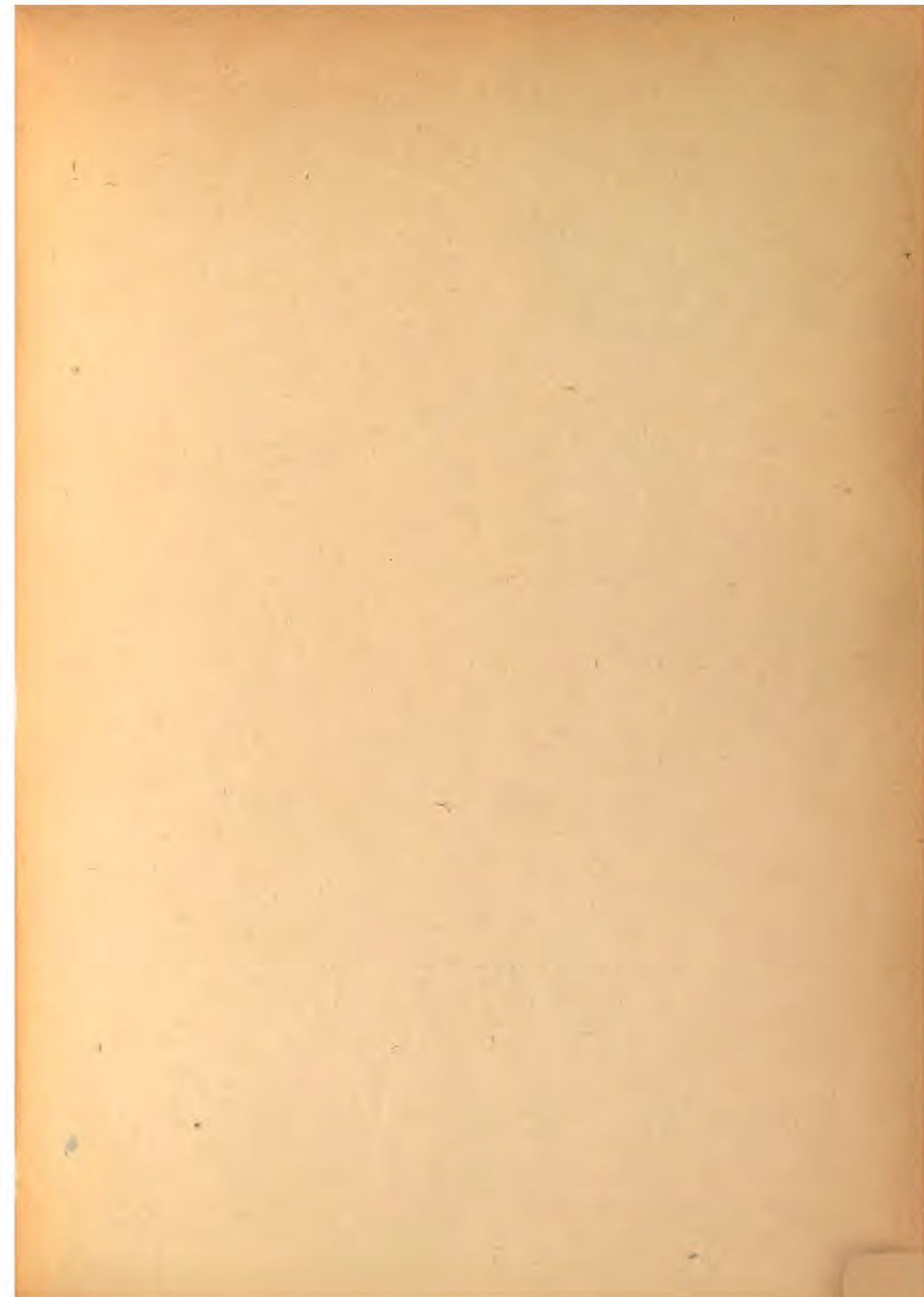
Black Beauty (Sewall), No. 31	For 5th and 6th Years.	.20	.30
Christmas Stories (Dickens) No. 5	For 5th and 7th Years.	.12½	.20
Gulliver's Travels (Swift), No. 13	For 6th and 8th Years.	.12½	.20
Little Nell (Dickens), No. 22	For 6th and 7th Years.	.12½	.20
Paul Dombey (Dickens), No. 14	For 6th and 7th Years.	.12½	.20
Pilgrim's Progress (Bunyan), No. 30	For 5th Year	.12½	.20
Round the World in Eighty Days (Verne) No. 34	For 5th Year	.20	.30
Snow Image (Hawthorne), No. 20	For 5th Year	.12½	.20
Twice Told Tales (Hawthorne), No. 15	For 7th and 8th Years.	.12½	.20
Two Years Before the Mast (Dana), No. 19	For 6th Year	.20	.30

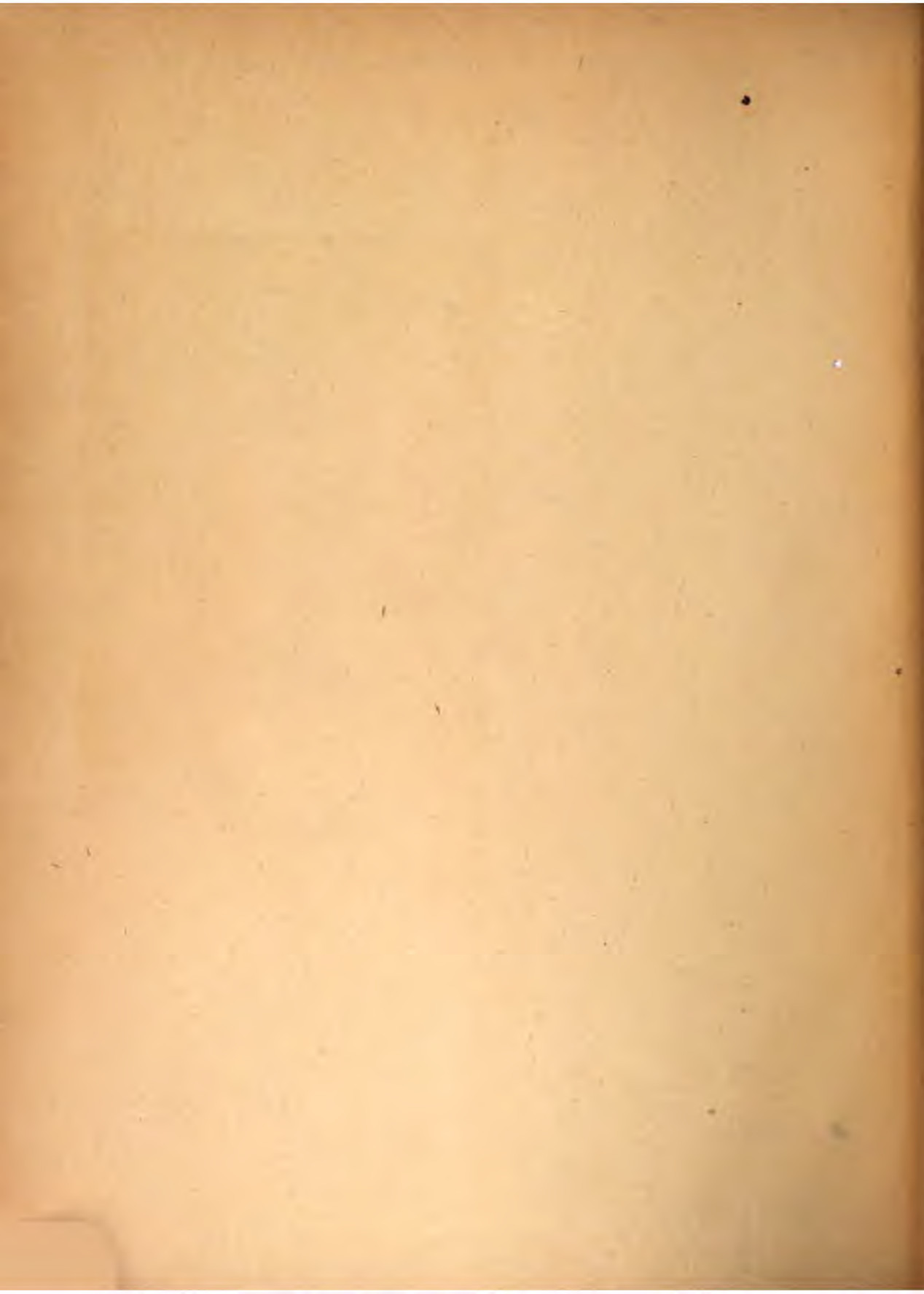
FOR CRITICAL STUDY OF ENGLISH IN GRAMMAR AND HIGH SCHOOLS.

Courtship of Miles Standish and Other Poems (Longfellow), No. 47	Full Text	.20	.30
David Copperfield's Childhood (Dickens), No. 36	Complete.	.20	.30
Enoch Arden and Other Poems (Tennyson), No. 6	Full Text.	.12½	.20
Evangeline (Longfellow), No. 21	Full Text.	.12½	.20
Five Great Authors No. 42	Each Selection Complete..	.20	.30
Goldsmith, Gray, Burns and Other Romantic Poets of the Eighteenth Century, No. 48	Nineteen Complete Poems.	.12½	.20
Lay of the Last Minstrel (Scott), No. 40	Full Text.	.12½	.20
Lady of the Lake (Scott), No. 9	Full Text.	.20	.30
Merchant of Venice (Shakespeare), No. 49	Complete.	.12½	.20
Prisoner of Chillon and Other Poems (Byron), No. 11		.12½	.20
Poems of Knightly Adventure, No. 26	Each Selection Complete..	.20	.30
Silas Marner (Eliot), No. 43	Complete.	.20	.30
Sketch Book (Irving), No. 17	Eight Complete Selections	.12½	.20
Song of Hiawatha (Longfellow), No. 37	Full Text.	.20	.30
Vicar of Wakefield (Goldsmith), No. 45	Complete.	.20	.30

University Publishing Co., 27 W. 23rd St., New York City.









3 2044 102 793 718

DATE DUE

[illegible]

